

Model Perplexity

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Baseline independent voting model

Load 1-D results to construct dataset to use for null-ish model

```
tic()
load("../fits/one_dim_fit/big-surveys_recoded_plus_estimates_1d.RData")
load("../fits/one_dim_fit/all_results_1d.RData")
res_1d <- all_res
rm(all_res)
toc()
```

6.416 sec elapsed

Fit model

```
tic()
res_null <- map(names(res_1d), function(src) {
  cat(paste0(src, "\n"))
  dat <- appended_data %>%
    filter(source==src) %>%
    ungroup() %>%
    select(res_1d[[src]]$item_summary$item) %>%
    as.matrix()
  em_mix_irt(dat, iters=1, irt_iters=1, w_alpha=c(0,1,0))
})
```

```
## CCES_2012
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## CCES_2013
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## CCES_2014
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## CCES_2015
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## CCES_2016
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
```

```

##
## CCES_2017
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## CCES_2018
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
names(res_null) <- names(res_1d)
toc()

```

19.268 sec elapsed

Null perplexity

```

tic()
perp_null <- map_df(names(res_null),
  function(nm) {
    cat(paste0(nm, "\n"))
    cv_perplexity(appended_data %>%
      filter(source==nm) %>%
      ungroup() %>%
      select(res_1d[[nm]]$item_summary$item) %>%
      as.matrix(),
      fit=res_null[[nm]],
      xsamp=1000, iters=1, irt_iters=1)
  }) %>%
mutate(survey = rep(names(res_null), each=2))

```

```

## CCES_2012
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## CCES_2013
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)

```

```
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## CCES_2014
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## CCES_2015
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## CCES_2016
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
```

```

##
## CCES_2017
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## CCES_2018
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)
##
## Outer iteration: 1
## Group probs = (0.0000, 1.0000, 0.0000)

```

```
toc()
```

```
## 118.471 sec elapsed
```

One Dim with mixing model

```

tic()
perp_1d <- map_df(names(res_1d),
  function(nm) {
    cat(paste0(nm, "\n"))
    cv_perplexity(appended_data %>%
      filter(source==nm) %>%
      ungroup() %>%
      select(res_1d[[nm]]$item_summary$item) %>%
      as.matrix(),
      fit=res_1d[[nm]],
      xsamp=1000)
  }) %>%
  mutate(survey = rep(names(res_1d), each=2))

```

```

## CCES_2012
## Outer iteration: 1

```

```

## Iteration: 1 (-249563.2590, Inf)
## Iteration: 10 (-226187.5729, 5.1223)
## Iteration: 20 (-223841.7051, 2.4021)
## Iteration: 30 (-222844.6727, 1.6090)
## Iteration: 40 (-222243.5552, 1.2266)
## Iteration: 50 (-221826.6203, 0.9975)
## Group probs = (0.6977, 0.2167, 0.0856)
##
## Outer iteration: 2
## Iteration: 1 (-228665.5772, 3.0826)
## Iteration: 10 (-228446.8742, 0.7656)
## Iteration: 20 (-228258.7598, 0.6602)
## Iteration: 30 (-228105.5250, 0.5835)
## Iteration: 40 (-227977.2138, 0.5239)
## Iteration: 50 (-227867.5977, 0.4759)
## Group probs = (0.7029, 0.2121, 0.0850)
##
## Outer iteration: 3
## Iteration: 1 (-229834.7426, 0.9538)
## Iteration: 10 (-229747.0930, 0.4391)
## Iteration: 20 (-229661.3860, 0.4059)
## Iteration: 30 (-229585.3153, 0.3772)
## Iteration: 40 (-229517.1568, 0.3523)
## Iteration: 50 (-229455.6011, 0.3305)
## Group probs = (0.7075, 0.2088, 0.0838)
##
## Outer iteration: 4
## Iteration: 1 (-231250.3466, 0.6947)
## Iteration: 10 (-231198.2840, 0.3135)
## Iteration: 20 (-231145.5038, 0.2972)
## Iteration: 30 (-231097.0352, 0.2820)
## Iteration: 40 (-231052.2898, 0.2682)
## Iteration: 50 (-231010.7981, 0.2557)
## Group probs = (0.7124, 0.2032, 0.0844)
##
## Outer iteration: 5
## Iteration: 1 (-232334.9151, 1.6421)
## Iteration: 10 (-232299.1419, 0.2432)
## Iteration: 20 (-232263.0570, 0.2327)
## Iteration: 30 (-232229.3788, 0.2231)
## Iteration: 40 (-232197.7649, 0.2143)
## Iteration: 50 (-232167.9869, 0.2063)
## Group probs = (0.7158, 0.2007, 0.0836)
##
## Outer iteration: 6
## Iteration: 1 (-233356.8023, 0.5317)
## Iteration: 10 (-233330.1732, 0.2008)
## Iteration: 20 (-233302.6300, 0.1942)
## Iteration: 30 (-233276.5906, 0.1877)
## Iteration: 40 (-233251.8787, 0.1816)
## Iteration: 50 (-233228.3698, 0.1759)
## Group probs = (0.7190, 0.1981, 0.0828)
##
## Outer iteration: 7

```

```
## Iteration: 1 (-234375.7846, 0.6965)
## Iteration: 10 (-234355.2701, 0.1697)
## Iteration: 20 (-234333.8071, 0.1649)
## Iteration: 30 (-234313.3342, 0.1602)
## Iteration: 40 (-234293.7444, 0.1558)
## Iteration: 50 (-234274.9645, 0.1516)
## Group probs = (0.7208, 0.1975, 0.0817)
##
## Outer iteration: 8
## Iteration: 1 (-235159.6484, 0.2038)
## Iteration: 10 (-235142.9578, 0.1483)
## Iteration: 20 (-235125.2031, 0.1450)
## Iteration: 30 (-235108.1347, 0.1415)
## Iteration: 40 (-235091.7002, 0.1382)
## Iteration: 50 (-235075.8574, 0.1350)
## Group probs = (0.7218, 0.1979, 0.0803)
##
## Outer iteration: 9
## Iteration: 1 (-235586.5189, 0.1477)
## Iteration: 10 (-235572.2474, 0.1331)
## Iteration: 20 (-235557.0113, 0.1306)
## Iteration: 30 (-235542.2962, 0.1279)
## Iteration: 40 (-235528.0664, 0.1251)
## Iteration: 50 (-235514.2931, 0.1225)
## Group probs = (0.7214, 0.1987, 0.0799)
##
## Outer iteration: 10
## Iteration: 1 (-235377.3558, 0.1728)
## Iteration: 10 (-235365.0474, 0.1207)
## Iteration: 20 (-235351.8052, 0.1185)
## Iteration: 30 (-235338.9665, 0.1162)
## Iteration: 40 (-235326.5073, 0.1140)
## Iteration: 50 (-235314.4072, 0.1118)
## Group probs = (0.7228, 0.1991, 0.0781)
##
## Outer iteration: 11
## Iteration: 1 (-236236.0138, 0.3534)
## Iteration: 10 (-236225.0618, 0.1103)
## Iteration: 20 (-236213.3263, 0.1088)
## Iteration: 30 (-236201.9180, 0.1069)
## Iteration: 40 (-236190.8166, 0.1051)
## Iteration: 50 (-236180.0068, 0.1033)
## Group probs = (0.7238, 0.1981, 0.0780)
##
## Outer iteration: 12
## Iteration: 1 (-236480.2945, 0.2044)
## Iteration: 10 (-236470.7091, 0.1013)
## Iteration: 20 (-236460.3714, 0.0997)
## Iteration: 30 (-236450.2976, 0.0981)
## Iteration: 40 (-236440.4710, 0.0966)
## Iteration: 50 (-236430.8795, 0.0951)
## Group probs = (0.7227, 0.1986, 0.0787)
##
## Outer iteration: 13
```

```
## Iteration: 1 (-235838.6687, 0.0966)
## Iteration: 10 (-235830.1189, 0.0941)
## Iteration: 20 (-235820.8683, 0.0925)
## Iteration: 30 (-235811.8291, 0.0911)
## Iteration: 40 (-235802.9910, 0.0898)
## Iteration: 50 (-235794.3459, 0.0885)
## Group probs = (0.7230, 0.1980, 0.0790)
##
## Outer iteration: 14
## Iteration: 1 (-235853.4914, 0.3954)
## Iteration: 10 (-235845.9311, 0.0866)
## Iteration: 20 (-235837.7398, 0.0853)
## Iteration: 30 (-235829.7201, 0.0841)
## Iteration: 40 (-235821.8636, 0.0830)
## Iteration: 50 (-235814.1638, 0.0819)
## Group probs = (0.7226, 0.1978, 0.0796)
##
## Outer iteration: 15
## Iteration: 1 (-235267.6764, 0.2452)
## Iteration: 10 (-235260.2411, 0.0828)
## Iteration: 20 (-235252.4658, 0.0817)
## Iteration: 30 (-235244.8806, 0.0806)
## Iteration: 40 (-235237.4572, 0.0794)
## Iteration: 50 (-235230.1832, 0.0784)
## Group probs = (0.7223, 0.1988, 0.0788)
##
## Outer iteration: 16
## Iteration: 1 (-235305.6924, 0.1478)
## Iteration: 10 (-235299.2361, 0.0769)
## Iteration: 20 (-235292.2617, 0.0759)
## Iteration: 30 (-235285.4186, 0.0750)
## Iteration: 40 (-235278.6977, 0.0741)
## Iteration: 50 (-235272.0940, 0.0732)
## Group probs = (0.7212, 0.1994, 0.0794)
##
## Outer iteration: 17
## Iteration: 1 (-234538.5181, 0.1641)
## Iteration: 10 (-234532.4967, 0.0729)
## Iteration: 20 (-234525.9785, 0.0720)
## Iteration: 30 (-234519.5750, 0.0712)
## Iteration: 40 (-234513.2798, 0.0704)
## Iteration: 50 (-234507.0889, 0.0696)
## Group probs = (0.7209, 0.2007, 0.0784)
##
## Outer iteration: 18
## Iteration: 1 (-234701.0070, 0.4529)
## Iteration: 10 (-234695.3289, 0.0693)
## Iteration: 20 (-234689.2092, 0.0687)
## Iteration: 30 (-234683.1963, 0.0680)
## Iteration: 40 (-234677.2809, 0.0673)
## Iteration: 50 (-234671.4584, 0.0666)
## Group probs = (0.7197, 0.2013, 0.0790)
##
## Outer iteration: 19
```

```
## Iteration: 1 (-234131.3974, 0.0727)
## Iteration: 10 (-234126.1986, 0.0660)
## Iteration: 20 (-234120.5523, 0.0652)
## Iteration: 30 (-234114.9930, 0.0645)
## Iteration: 40 (-234109.5162, 0.0639)
## Iteration: 50 (-234104.1191, 0.0632)
## Group probs = (0.7203, 0.2010, 0.0787)
##
## Outer iteration: 20
## Iteration: 1 (-234322.0173, 0.1939)
## Iteration: 10 (-234317.1020, 0.0629)
## Iteration: 20 (-234311.7718, 0.0625)
## Iteration: 30 (-234306.5239, 0.0619)
## Iteration: 40 (-234301.3516, 0.0613)
## Iteration: 50 (-234296.2518, 0.0607)
## Group probs = (0.7180, 0.2009, 0.0811)
##
## Outer iteration: 21
## Iteration: 1 (-232625.6054, 0.6255)
## Iteration: 10 (-232620.3709, 0.0617)
## Iteration: 20 (-232615.2676, 0.0604)
## Iteration: 30 (-232610.2769, 0.0596)
## Iteration: 40 (-232605.3678, 0.0589)
## Iteration: 50 (-232600.5317, 0.0583)
## Group probs = (0.7160, 0.2028, 0.0812)
##
## Outer iteration: 22
## Iteration: 1 (-231915.7297, 0.3486)
## Iteration: 10 (-231911.2622, 0.0580)
## Iteration: 20 (-231906.5074, 0.0573)
## Iteration: 30 (-231901.8321, 0.0568)
## Iteration: 40 (-231897.2216, 0.0562)
## Iteration: 50 (-231892.6711, 0.0557)
## Group probs = (0.7149, 0.2033, 0.0817)
##
## Outer iteration: 23
## Iteration: 1 (-231167.5951, 0.2976)
## Iteration: 10 (-231163.3206, 0.0561)
## Iteration: 20 (-231158.7558, 0.0556)
## Iteration: 30 (-231154.2598, 0.0551)
## Iteration: 40 (-231149.8249, 0.0546)
## Iteration: 50 (-231145.4476, 0.0541)
## Group probs = (0.7163, 0.2037, 0.0800)
##
## Outer iteration: 24
## Iteration: 1 (-231878.3380, 0.0841)
## Iteration: 10 (-231874.0141, 0.0548)
## Iteration: 20 (-231869.4876, 0.0547)
## Iteration: 30 (-231865.0566, 0.0543)
## Iteration: 40 (-231860.6982, 0.0537)
## Iteration: 50 (-231856.4046, 0.0532)
## Group probs = (0.7165, 0.2040, 0.0795)
##
## Outer iteration: 25
```

```
## Iteration: 1 (-231963.3909, 0.0566)
## Iteration: 10 (-231959.6217, 0.0520)
## Iteration: 20 (-231955.4975, 0.0516)
## Iteration: 30 (-231951.4229, 0.0511)
## Iteration: 40 (-231947.3955, 0.0507)
## Iteration: 50 (-231943.4138, 0.0503)
## Group probs = (0.7138, 0.2066, 0.0796)
##
## Outer iteration: 26
## Iteration: 1 (-230947.3998, 0.2520)
## Iteration: 10 (-230943.5869, 0.0506)
## Iteration: 20 (-230939.5839, 0.0501)
## Iteration: 30 (-230935.6510, 0.0497)
## Iteration: 40 (-230931.7698, 0.0493)
## Iteration: 50 (-230927.9342, 0.0489)
## Group probs = (0.7126, 0.2076, 0.0798)
##
## Outer iteration: 27
## Iteration: 1 (-230293.7598, 0.1117)
## Iteration: 10 (-230290.1916, 0.0490)
## Iteration: 20 (-230286.3306, 0.0486)
## Iteration: 30 (-230282.5187, 0.0483)
## Iteration: 40 (-230278.7503, 0.0479)
## Iteration: 50 (-230275.0230, 0.0476)
## Group probs = (0.7146, 0.2068, 0.0786)
##
## Outer iteration: 28
## Iteration: 1 (-231318.9254, 0.1305)
## Iteration: 10 (-231315.5000, 0.0471)
## Iteration: 20 (-231311.8206, 0.0470)
## Iteration: 30 (-231308.1867, 0.0467)
## Iteration: 40 (-231304.5912, 0.0464)
## Iteration: 50 (-231301.0324, 0.0460)
## Group probs = (0.7165, 0.2059, 0.0776)
##
## Outer iteration: 29
## Iteration: 1 (-232271.1384, 0.0675)
## Iteration: 10 (-232267.9156, 0.0451)
## Iteration: 20 (-232264.4789, 0.0448)
## Iteration: 30 (-232261.0812, 0.0445)
## Iteration: 40 (-232257.7176, 0.0442)
## Iteration: 50 (-232254.3861, 0.0439)
## Group probs = (0.7123, 0.2089, 0.0788)
##
## Outer iteration: 30
## Iteration: 1 (-230310.1887, 0.1605)
## Iteration: 10 (-230306.6765, 0.0448)
## Iteration: 20 (-230303.2001, 0.0442)
## Iteration: 30 (-230299.8078, 0.0439)
## Iteration: 40 (-230296.4625, 0.0435)
## Iteration: 50 (-230293.1546, 0.0432)
## Group probs = (0.7129, 0.2093, 0.0778)
##
## Outer iteration: 31
```

```
## Iteration: 1 (-230768.9957, 0.0743)
## Iteration: 10 (-230765.9755, 0.0431)
## Iteration: 20 (-230762.7143, 0.0430)
## Iteration: 30 (-230759.4904, 0.0428)
## Iteration: 40 (-230756.2978, 0.0425)
## Iteration: 50 (-230753.1346, 0.0422)
## Group probs = (0.7106, 0.2115, 0.0780)
##
## Outer iteration: 32
## Iteration: 1 (-229960.4436, 0.4594)
## Iteration: 10 (-229957.2892, 0.0424)
## Iteration: 20 (-229954.0801, 0.0419)
## Iteration: 30 (-229950.9348, 0.0416)
## Iteration: 40 (-229947.8279, 0.0413)
## Iteration: 50 (-229944.7528, 0.0410)
## Group probs = (0.7104, 0.2114, 0.0782)
##
## Outer iteration: 33
## Iteration: 1 (-229910.1078, 0.2226)
## Iteration: 10 (-229907.2994, 0.0410)
## Iteration: 20 (-229904.2152, 0.0408)
## Iteration: 30 (-229901.1592, 0.0406)
## Iteration: 40 (-229898.1300, 0.0404)
## Iteration: 50 (-229895.1265, 0.0401)
## Group probs = (0.7107, 0.2111, 0.0783)
##
## Outer iteration: 34
## Iteration: 1 (-230201.8474, 0.1822)
## Iteration: 10 (-230199.0231, 0.0397)
## Iteration: 20 (-230196.0495, 0.0394)
## Iteration: 30 (-230193.1184, 0.0391)
## Iteration: 40 (-230190.2188, 0.0388)
## Iteration: 50 (-230187.3471, 0.0386)
## Group probs = (0.7116, 0.2104, 0.0780)
##
## Outer iteration: 35
## Iteration: 1 (-230667.2366, 0.3914)
## Iteration: 10 (-230664.5182, 0.0389)
## Iteration: 20 (-230661.5959, 0.0389)
## Iteration: 30 (-230658.7018, 0.0387)
## Iteration: 40 (-230655.8321, 0.0385)
## Iteration: 50 (-230652.9856, 0.0383)
## Group probs = (0.7112, 0.2114, 0.0773)
##
## Outer iteration: 36
## Iteration: 1 (-230700.7992, 0.1281)
## Iteration: 10 (-230698.1547, 0.0382)
## Iteration: 20 (-230695.3497, 0.0380)
## Iteration: 30 (-230692.5826, 0.0378)
## Iteration: 40 (-230689.8422, 0.0376)
## Iteration: 50 (-230687.1251, 0.0374)
## Group probs = (0.7087, 0.2124, 0.0790)
##
## Outer iteration: 37
```

```

## Iteration: 1 (-229395.4160, 0.1277)
## Iteration: 10 (-229392.7763, 0.0375)
## Iteration: 20 (-229390.0357, 0.0370)
## Iteration: 30 (-229387.3319, 0.0368)
## Iteration: 40 (-229384.6525, 0.0366)
## Iteration: 50 (-229381.9945, 0.0364)
## Group probs = (0.7085, 0.2119, 0.0796)
##
## Outer iteration: 38
## Iteration: 1 (-229080.7692, 0.4135)
## Iteration: 10 (-229078.3500, 0.0363)
## Iteration: 20 (-229075.7461, 0.0360)
## Iteration: 30 (-229073.1644, 0.0358)
## Iteration: 40 (-229070.6015, 0.0356)
## Iteration: 50 (-229068.0568, 0.0354)
## Group probs = (0.7105, 0.2113, 0.0783)
##
## Outer iteration: 39
## Iteration: 1 (-230324.6709, 0.5411)
## Iteration: 10 (-230322.2120, 0.0352)
## Iteration: 20 (-230319.6580, 0.0351)
## Iteration: 30 (-230317.1324, 0.0349)
## Iteration: 40 (-230314.6272, 0.0348)
## Iteration: 50 (-230312.1403, 0.0346)
## Group probs = (0.7104, 0.2110, 0.0785)
##
## Outer iteration: 40
## Iteration: 1 (-230173.3869, 0.1247)
## Iteration: 10 (-230171.1256, 0.0345)
## Iteration: 20 (-230168.6391, 0.0344)
## Iteration: 30 (-230166.1704, 0.0342)
## Iteration: 40 (-230163.7186, 0.0341)
## Iteration: 50 (-230161.2834, 0.0339)
## Group probs = (0.7128, 0.2090, 0.0782)
##
## Outer iteration: 1
## Iteration: 1 (-249142.6203, Inf)
## Iteration: 10 (-225915.9010, 5.1249)
## Iteration: 20 (-223577.6173, 2.4054)
## Iteration: 30 (-222583.5059, 1.6113)
## Iteration: 40 (-221983.8149, 1.2286)
## Iteration: 50 (-221567.5483, 0.9993)
## Group probs = (0.6940, 0.2198, 0.0862)
##
## Outer iteration: 2
## Iteration: 1 (-227882.2600, 2.4188)
## Iteration: 10 (-227663.8013, 0.7697)
## Iteration: 20 (-227475.5573, 0.6636)
## Iteration: 30 (-227322.1860, 0.5865)
## Iteration: 40 (-227193.7279, 0.5266)
## Iteration: 50 (-227083.9512, 0.4783)
## Group probs = (0.7021, 0.2123, 0.0857)
##
## Outer iteration: 3

```

```
## Iteration: 1 (-230096.3716, 1.4998)
## Iteration: 10 (-230009.3811, 0.4381)
## Iteration: 20 (-229924.5831, 0.4051)
## Iteration: 30 (-229849.2634, 0.3766)
## Iteration: 40 (-229781.7226, 0.3518)
## Iteration: 50 (-229720.6806, 0.3303)
## Group probs = (0.7080, 0.2070, 0.0850)
##
## Outer iteration: 4
## Iteration: 1 (-232217.7197, 0.7436)
## Iteration: 10 (-232167.0516, 0.3102)
## Iteration: 20 (-232115.7826, 0.2939)
## Iteration: 30 (-232068.6429, 0.2791)
## Iteration: 40 (-232025.0727, 0.2657)
## Iteration: 50 (-231984.6284, 0.2535)
## Group probs = (0.7129, 0.2029, 0.0841)
##
## Outer iteration: 5
## Iteration: 1 (-233978.2515, 0.5654)
## Iteration: 10 (-233943.0340, 0.2432)
## Iteration: 20 (-233906.8640, 0.2337)
## Iteration: 30 (-233873.0054, 0.2245)
## Iteration: 40 (-233841.1886, 0.2159)
## Iteration: 50 (-233811.2041, 0.2080)
## Group probs = (0.7167, 0.1994, 0.0839)
##
## Outer iteration: 6
## Iteration: 1 (-235043.9599, 0.8247)
## Iteration: 10 (-235017.3917, 0.2013)
## Iteration: 20 (-234989.9440, 0.1947)
## Iteration: 30 (-234963.9794, 0.1883)
## Iteration: 40 (-234939.3242, 0.1822)
## Iteration: 50 (-234915.8570, 0.1765)
## Group probs = (0.7165, 0.1983, 0.0852)
##
## Outer iteration: 7
## Iteration: 1 (-234303.7682, 0.6912)
## Iteration: 10 (-234282.8339, 0.1729)
## Iteration: 20 (-234260.9238, 0.1675)
## Iteration: 30 (-234240.0082, 0.1626)
## Iteration: 40 (-234219.9909, 0.1581)
## Iteration: 50 (-234200.8003, 0.1538)
## Group probs = (0.7197, 0.1971, 0.0833)
##
## Outer iteration: 8
## Iteration: 1 (-235806.3064, 0.2079)
## Iteration: 10 (-235789.4442, 0.1491)
## Iteration: 20 (-235771.6100, 0.1458)
## Iteration: 30 (-235754.4652, 0.1423)
## Iteration: 40 (-235737.9514, 0.1390)
## Iteration: 50 (-235722.0254, 0.1357)
## Group probs = (0.7197, 0.1967, 0.0836)
##
## Outer iteration: 9
```

```
## Iteration: 1 (-235597.3071, 0.2098)
## Iteration: 10 (-235583.3619, 0.1323)
## Iteration: 20 (-235568.3945, 0.1294)
## Iteration: 30 (-235553.9248, 0.1267)
## Iteration: 40 (-235539.9212, 0.1241)
## Iteration: 50 (-235526.3565, 0.1216)
## Group probs = (0.7211, 0.1962, 0.0827)
##
## Outer iteration: 10
## Iteration: 1 (-236074.0225, 0.2075)
## Iteration: 10 (-236061.8272, 0.1197)
## Iteration: 20 (-236048.7483, 0.1178)
## Iteration: 30 (-236036.0630, 0.1156)
## Iteration: 40 (-236023.7456, 0.1134)
## Iteration: 50 (-236011.7759, 0.1113)
## Group probs = (0.7172, 0.1991, 0.0837)
##
## Outer iteration: 11
## Iteration: 1 (-234144.7267, 0.1862)
## Iteration: 10 (-234133.4990, 0.1123)
## Iteration: 20 (-234121.6334, 0.1099)
## Iteration: 30 (-234110.1260, 0.1078)
## Iteration: 40 (-234098.9378, 0.1059)
## Iteration: 50 (-234088.0474, 0.1040)
## Group probs = (0.7190, 0.1983, 0.0828)
##
## Outer iteration: 12
## Iteration: 1 (-235129.8025, 0.1714)
## Iteration: 10 (-235120.3028, 0.1009)
## Iteration: 20 (-235110.0987, 0.0993)
## Iteration: 30 (-235100.1480, 0.0978)
## Iteration: 40 (-235090.4346, 0.0962)
## Iteration: 50 (-235080.9469, 0.0948)
## Group probs = (0.7185, 0.1991, 0.0824)
##
## Outer iteration: 13
## Iteration: 1 (-234895.1613, 0.2493)
## Iteration: 10 (-234886.4094, 0.0946)
## Iteration: 20 (-234876.9568, 0.0934)
## Iteration: 30 (-234867.7224, 0.0921)
## Iteration: 40 (-234858.6936, 0.0908)
## Iteration: 50 (-234849.8613, 0.0895)
## Group probs = (0.7195, 0.1994, 0.0811)
##
## Outer iteration: 14
## Iteration: 1 (-235565.5036, 0.2024)
## Iteration: 10 (-235557.5952, 0.0880)
## Iteration: 20 (-235549.0829, 0.0870)
## Iteration: 30 (-235540.7512, 0.0859)
## Iteration: 40 (-235532.5894, 0.0847)
## Iteration: 50 (-235524.5901, 0.0836)
## Group probs = (0.7193, 0.1997, 0.0810)
##
## Outer iteration: 15
```

```
## Iteration: 1 (-235341.4875, 0.2411)
## Iteration: 10 (-235334.2801, 0.0830)
## Iteration: 20 (-235326.4634, 0.0821)
## Iteration: 30 (-235318.8015, 0.0810)
## Iteration: 40 (-235311.2855, 0.0800)
## Iteration: 50 (-235303.9094, 0.0790)
## Group probs = (0.7187, 0.1994, 0.0819)
##
## Outer iteration: 16
## Iteration: 1 (-234846.1105, 0.1831)
## Iteration: 10 (-234839.5134, 0.0779)
## Iteration: 20 (-234832.3798, 0.0768)
## Iteration: 30 (-234825.3776, 0.0758)
## Iteration: 40 (-234818.4988, 0.0749)
## Iteration: 50 (-234811.7386, 0.0741)
## Group probs = (0.7190, 0.1983, 0.0828)
##
## Outer iteration: 17
## Iteration: 1 (-234557.7909, 0.4675)
## Iteration: 10 (-234551.5323, 0.0737)
## Iteration: 20 (-234544.9206, 0.0726)
## Iteration: 30 (-234538.4432, 0.0717)
## Iteration: 40 (-234532.0801, 0.0709)
## Iteration: 50 (-234525.8237, 0.0700)
## Group probs = (0.7182, 0.2003, 0.0814)
##
## Outer iteration: 18
## Iteration: 1 (-234609.9173, 0.5860)
## Iteration: 10 (-234604.0120, 0.0702)
## Iteration: 20 (-234597.7632, 0.0695)
## Iteration: 30 (-234591.6340, 0.0688)
## Iteration: 40 (-234585.6057, 0.0680)
## Iteration: 50 (-234579.6718, 0.0673)
## Group probs = (0.7186, 0.2007, 0.0807)
##
## Outer iteration: 19
## Iteration: 1 (-234991.5082, 0.2743)
## Iteration: 10 (-234986.0904, 0.0664)
## Iteration: 20 (-234980.2724, 0.0658)
## Iteration: 30 (-234974.5527, 0.0651)
## Iteration: 40 (-234968.9208, 0.0645)
## Iteration: 50 (-234963.3718, 0.0639)
## Group probs = (0.7148, 0.2042, 0.0810)
##
## Outer iteration: 20
## Iteration: 1 (-233436.0360, 0.4600)
## Iteration: 10 (-233430.4738, 0.0656)
## Iteration: 20 (-233424.7051, 0.0648)
## Iteration: 30 (-233419.0749, 0.0641)
## Iteration: 40 (-233413.5449, 0.0634)
## Iteration: 50 (-233408.1019, 0.0628)
## Group probs = (0.7159, 0.2038, 0.0804)
##
## Outer iteration: 21
```

```
## Iteration: 1 (-234180.2808, 0.5439)
## Iteration: 10 (-234175.3231, 0.0617)
## Iteration: 20 (-234170.0150, 0.0611)
## Iteration: 30 (-234164.7911, 0.0606)
## Iteration: 40 (-234159.6416, 0.0601)
## Iteration: 50 (-234154.5623, 0.0595)
## Group probs = (0.7176, 0.2005, 0.0819)
##
## Outer iteration: 22
## Iteration: 1 (-234147.1267, 1.3014)
## Iteration: 10 (-234141.8049, 0.0596)
## Iteration: 20 (-234136.7853, 0.0587)
## Iteration: 30 (-234131.9190, 0.0579)
## Iteration: 40 (-234127.1417, 0.0572)
## Iteration: 50 (-234122.4359, 0.0566)
## Group probs = (0.7158, 0.2019, 0.0823)
##
## Outer iteration: 23
## Iteration: 1 (-233265.4422, 0.0637)
## Iteration: 10 (-233261.1410, 0.0567)
## Iteration: 20 (-233256.4791, 0.0561)
## Iteration: 30 (-233251.8815, 0.0555)
## Iteration: 40 (-233247.3414, 0.0550)
## Iteration: 50 (-233242.8562, 0.0546)
## Group probs = (0.7129, 0.2040, 0.0831)
##
## Outer iteration: 24
## Iteration: 1 (-231701.2222, 0.4036)
## Iteration: 10 (-231696.8876, 0.0555)
## Iteration: 20 (-231692.3776, 0.0547)
## Iteration: 30 (-231687.9527, 0.0541)
## Iteration: 40 (-231683.5936, 0.0536)
## Iteration: 50 (-231679.2928, 0.0531)
## Group probs = (0.7115, 0.2065, 0.0820)
##
## Outer iteration: 25
## Iteration: 1 (-231509.2764, 0.7675)
## Iteration: 10 (-231505.0766, 0.0531)
## Iteration: 20 (-231500.7068, 0.0527)
## Iteration: 30 (-231496.4158, 0.0523)
## Iteration: 40 (-231492.1821, 0.0519)
## Iteration: 50 (-231487.9995, 0.0515)
## Group probs = (0.7101, 0.2095, 0.0804)
##
## Outer iteration: 26
## Iteration: 1 (-231668.2160, 1.2880)
## Iteration: 10 (-231663.3046, 0.0529)
## Iteration: 20 (-231658.8596, 0.0522)
## Iteration: 30 (-231654.5839, 0.0515)
## Iteration: 40 (-231650.3970, 0.0509)
## Iteration: 50 (-231646.2757, 0.0504)
## Group probs = (0.7111, 0.2084, 0.0805)
##
## Outer iteration: 27
```

```
## Iteration: 1 (-232014.5598, 0.2977)
## Iteration: 10 (-232010.8561, 0.0498)
## Iteration: 20 (-232006.8335, 0.0496)
## Iteration: 30 (-232002.8587, 0.0493)
## Iteration: 40 (-231998.9262, 0.0489)
## Iteration: 50 (-231995.0342, 0.0486)
## Group probs = (0.7090, 0.2110, 0.0800)
##
## Outer iteration: 28
## Iteration: 1 (-231447.6358, 0.5990)
## Iteration: 10 (-231443.6846, 0.0492)
## Iteration: 20 (-231439.6832, 0.0488)
## Iteration: 30 (-231435.7747, 0.0483)
## Iteration: 40 (-231431.9228, 0.0479)
## Iteration: 50 (-231428.1170, 0.0476)
## Group probs = (0.7060, 0.2136, 0.0803)
##
## Outer iteration: 29
## Iteration: 1 (-230533.7223, 0.8645)
## Iteration: 10 (-230529.5175, 0.0488)
## Iteration: 20 (-230525.4940, 0.0481)
## Iteration: 30 (-230521.6112, 0.0475)
## Iteration: 40 (-230517.8033, 0.0470)
## Iteration: 50 (-230514.0509, 0.0466)
## Group probs = (0.7046, 0.2132, 0.0822)
##
## Outer iteration: 30
## Iteration: 1 (-229552.2364, 0.3291)
## Iteration: 10 (-229548.7493, 0.0466)
## Iteration: 20 (-229545.0609, 0.0460)
## Iteration: 30 (-229541.4154, 0.0457)
## Iteration: 40 (-229537.8062, 0.0454)
## Iteration: 50 (-229534.2314, 0.0451)
## Group probs = (0.7015, 0.2147, 0.0839)
##
## Outer iteration: 31
## Iteration: 1 (-228069.0871, 0.0510)
## Iteration: 10 (-228065.6638, 0.0454)
## Iteration: 20 (-228062.1094, 0.0447)
## Iteration: 30 (-228058.6135, 0.0443)
## Iteration: 40 (-228055.1573, 0.0440)
## Iteration: 50 (-228051.7351, 0.0437)
## Group probs = (0.7002, 0.2160, 0.0838)
##
## Outer iteration: 32
## Iteration: 1 (-227887.1851, 0.4789)
## Iteration: 10 (-227883.8351, 0.0439)
## Iteration: 20 (-227880.3804, 0.0435)
## Iteration: 30 (-227876.9926, 0.0432)
## Iteration: 40 (-227873.6476, 0.0428)
## Iteration: 50 (-227870.3381, 0.0425)
## Group probs = (0.7006, 0.2160, 0.0834)
##
## Outer iteration: 33
```

```
## Iteration: 1 (-228130.6351, 0.2207)
## Iteration: 10 (-228127.5978, 0.0425)
## Iteration: 20 (-228124.2784, 0.0424)
## Iteration: 30 (-228120.9912, 0.0422)
## Iteration: 40 (-228117.7332, 0.0419)
## Iteration: 50 (-228114.5030, 0.0417)
## Group probs = (0.6996, 0.2149, 0.0854)
##
## Outer iteration: 34
## Iteration: 1 (-227300.8405, 0.5093)
## Iteration: 10 (-227297.7518, 0.0417)
## Iteration: 20 (-227294.5860, 0.0411)
## Iteration: 30 (-227291.4621, 0.0407)
## Iteration: 40 (-227288.3668, 0.0405)
## Iteration: 50 (-227285.2972, 0.0402)
## Group probs = (0.6987, 0.2162, 0.0850)
##
## Outer iteration: 35
## Iteration: 1 (-227244.3529, 0.5976)
## Iteration: 10 (-227241.3096, 0.0404)
## Iteration: 20 (-227238.1699, 0.0402)
## Iteration: 30 (-227235.0832, 0.0399)
## Iteration: 40 (-227232.0293, 0.0397)
## Iteration: 50 (-227229.0031, 0.0394)
## Group probs = (0.6984, 0.2169, 0.0847)
##
## Outer iteration: 36
## Iteration: 1 (-227218.5720, 0.0586)
## Iteration: 10 (-227215.7931, 0.0395)
## Iteration: 20 (-227212.7880, 0.0393)
## Iteration: 30 (-227209.8167, 0.0391)
## Iteration: 40 (-227206.8718, 0.0389)
## Iteration: 50 (-227203.9506, 0.0387)
## Group probs = (0.6986, 0.2161, 0.0853)
##
## Outer iteration: 37
## Iteration: 1 (-226976.4254, 0.2674)
## Iteration: 10 (-226973.6044, 0.0388)
## Iteration: 20 (-226970.6613, 0.0387)
## Iteration: 30 (-226967.7584, 0.0384)
## Iteration: 40 (-226964.8823, 0.0382)
## Iteration: 50 (-226962.0296, 0.0380)
## Group probs = (0.6973, 0.2169, 0.0858)
##
## Outer iteration: 38
## Iteration: 1 (-226369.6584, 0.0536)
## Iteration: 10 (-226367.0602, 0.0378)
## Iteration: 20 (-226364.2323, 0.0375)
## Iteration: 30 (-226361.4289, 0.0372)
## Iteration: 40 (-226358.6461, 0.0370)
## Iteration: 50 (-226355.8830, 0.0368)
## Group probs = (0.6962, 0.2160, 0.0878)
##
## Outer iteration: 39
```

```

## Iteration: 1 (-225246.4869, 0.8131)
## Iteration: 10 (-225243.4117, 0.0382)
## Iteration: 20 (-225240.5886, 0.0375)
## Iteration: 30 (-225237.8343, 0.0370)
## Iteration: 40 (-225235.1165, 0.0367)
## Iteration: 50 (-225232.4268, 0.0364)
## Group probs = (0.6956, 0.2174, 0.0870)
##
## Outer iteration: 40
## Iteration: 1 (-225351.4622, 0.5113)
## Iteration: 10 (-225348.9112, 0.0359)
## Iteration: 20 (-225346.2541, 0.0357)
## Iteration: 30 (-225343.6296, 0.0354)
## Iteration: 40 (-225341.0263, 0.0352)
## Iteration: 50 (-225338.4414, 0.0351)
## Group probs = (0.6952, 0.2174, 0.0874)
##
## Outer iteration: 1
## Iteration: 1 (-249482.5833,   Inf)
## Iteration: 10 (-226339.6094, 5.1100)
## Iteration: 20 (-224025.9095, 2.3960)
## Iteration: 30 (-223043.0171, 1.6048)
## Iteration: 40 (-222450.4792, 1.2236)
## Iteration: 50 (-222039.4699, 0.9951)
## Group probs = (0.6943, 0.2181, 0.0876)
##
## Outer iteration: 2
## Iteration: 1 (-227863.9512, 2.8571)
## Iteration: 10 (-227649.8773, 0.7640)
## Iteration: 20 (-227465.7841, 0.6581)
## Iteration: 30 (-227315.9182, 0.5815)
## Iteration: 40 (-227190.4754, 0.5220)
## Iteration: 50 (-227083.3400, 0.4741)
## Group probs = (0.7033, 0.2113, 0.0854)
##
## Outer iteration: 3
## Iteration: 1 (-230851.8211, 1.1977)
## Iteration: 10 (-230765.6396, 0.4353)
## Iteration: 20 (-230681.9701, 0.4032)
## Iteration: 30 (-230607.7034, 0.3750)
## Iteration: 40 (-230541.1429, 0.3504)
## Iteration: 50 (-230481.0173, 0.3288)
## Group probs = (0.7073, 0.2073, 0.0853)
##
## Outer iteration: 4
## Iteration: 1 (-231891.9675, 0.7892)
## Iteration: 10 (-231841.7178, 0.3108)
## Iteration: 20 (-231790.7038, 0.2944)
## Iteration: 30 (-231743.8329, 0.2794)
## Iteration: 40 (-231700.5486, 0.2658)
## Iteration: 50 (-231660.4033, 0.2535)
## Group probs = (0.7109, 0.2051, 0.0840)
##
## Outer iteration: 5

```

```
## Iteration: 1 (-233324.3916, 0.3435)
## Iteration: 10 (-233290.0240, 0.2420)
## Iteration: 20 (-233254.4849, 0.2325)
## Iteration: 30 (-233221.1975, 0.2233)
## Iteration: 40 (-233189.9173, 0.2148)
## Iteration: 50 (-233160.4425, 0.2068)
## Group probs = (0.7145, 0.2007, 0.0847)
##
## Outer iteration: 6
## Iteration: 1 (-234059.1999, 1.1243)
## Iteration: 10 (-234032.6353, 0.2006)
## Iteration: 20 (-234005.6089, 0.1937)
## Iteration: 30 (-233980.0973, 0.1871)
## Iteration: 40 (-233955.8940, 0.1811)
## Iteration: 50 (-233932.8704, 0.1754)
## Group probs = (0.7181, 0.1976, 0.0843)
##
## Outer iteration: 7
## Iteration: 1 (-235184.4373, 0.6481)
## Iteration: 10 (-235164.0009, 0.1700)
## Iteration: 20 (-235142.7680, 0.1652)
## Iteration: 30 (-235122.5358, 0.1605)
## Iteration: 40 (-235103.1853, 0.1561)
## Iteration: 50 (-235084.6403, 0.1519)
## Group probs = (0.7182, 0.1966, 0.0852)
##
## Outer iteration: 8
## Iteration: 1 (-234518.6508, 0.9403)
## Iteration: 10 (-234501.9854, 0.1493)
## Iteration: 20 (-234484.5394, 0.1452)
## Iteration: 30 (-234467.8024, 0.1414)
## Iteration: 40 (-234451.7003, 0.1379)
## Iteration: 50 (-234436.1843, 0.1346)
## Group probs = (0.7226, 0.1946, 0.0828)
##
## Outer iteration: 9
## Iteration: 1 (-236559.4107, 0.2253)
## Iteration: 10 (-236545.5975, 0.1300)
## Iteration: 20 (-236531.1277, 0.1276)
## Iteration: 30 (-236517.1778, 0.1250)
## Iteration: 40 (-236503.6906, 0.1224)
## Iteration: 50 (-236490.6335, 0.1199)
## Group probs = (0.7263, 0.1924, 0.0812)
##
## Outer iteration: 10
## Iteration: 1 (-238045.9009, 0.3633)
## Iteration: 10 (-238033.8637, 0.1173)
## Iteration: 20 (-238021.2994, 0.1155)
## Iteration: 30 (-238009.1669, 0.1133)
## Iteration: 40 (-237997.4057, 0.1112)
## Iteration: 50 (-237985.9867, 0.1091)
## Group probs = (0.7265, 0.1918, 0.0818)
##
## Outer iteration: 11
```

```
## Iteration: 1 (-237564.4423, 0.6394)
## Iteration: 10 (-237553.9811, 0.1083)
## Iteration: 20 (-237542.9886, 0.1061)
## Iteration: 30 (-237532.3344, 0.1041)
## Iteration: 40 (-237521.9771, 0.1022)
## Iteration: 50 (-237511.8947, 0.1004)
## Group probs = (0.7238, 0.1956, 0.0806)
##
## Outer iteration: 12
## Iteration: 1 (-236750.3549, 0.6399)
## Iteration: 10 (-236740.7785, 0.1005)
## Iteration: 20 (-236730.7923, 0.0988)
## Iteration: 30 (-236721.1034, 0.0971)
## Iteration: 40 (-236711.6637, 0.0955)
## Iteration: 50 (-236702.4533, 0.0940)
## Group probs = (0.7223, 0.1969, 0.0808)
##
## Outer iteration: 13
## Iteration: 1 (-235952.4530, 0.0953)
## Iteration: 10 (-235944.1916, 0.0928)
## Iteration: 20 (-235935.2812, 0.0913)
## Iteration: 30 (-235926.5768, 0.0900)
## Iteration: 40 (-235918.0657, 0.0887)
## Iteration: 50 (-235909.7395, 0.0874)
## Group probs = (0.7226, 0.1976, 0.0798)
##
## Outer iteration: 14
## Iteration: 1 (-236199.7516, 0.2821)
## Iteration: 10 (-236192.1890, 0.0867)
## Iteration: 20 (-236183.9899, 0.0858)
## Iteration: 30 (-236175.9653, 0.0847)
## Iteration: 40 (-236168.1067, 0.0836)
## Iteration: 50 (-236160.4074, 0.0825)
## Group probs = (0.7259, 0.1943, 0.0798)
##
## Outer iteration: 15
## Iteration: 1 (-237373.8675, 0.5097)
## Iteration: 10 (-237366.6437, 0.0804)
## Iteration: 20 (-237359.2222, 0.0794)
## Iteration: 30 (-237352.0147, 0.0783)
## Iteration: 40 (-237344.9675, 0.0773)
## Iteration: 50 (-237338.0621, 0.0763)
## Group probs = (0.7257, 0.1944, 0.0799)
##
## Outer iteration: 16
## Iteration: 1 (-237155.9669, 0.2140)
## Iteration: 10 (-237149.8847, 0.0753)
## Iteration: 20 (-237143.2495, 0.0744)
## Iteration: 30 (-237136.7324, 0.0735)
## Iteration: 40 (-237130.3291, 0.0726)
## Iteration: 50 (-237124.0356, 0.0718)
## Group probs = (0.7246, 0.1951, 0.0803)
##
## Outer iteration: 17
```

```
## Iteration: 1 (-236477.0705, 0.0913)
## Iteration: 10 (-236471.2148, 0.0721)
## Iteration: 20 (-236464.8903, 0.0713)
## Iteration: 30 (-236458.6793, 0.0705)
## Iteration: 40 (-236452.5745, 0.0698)
## Iteration: 50 (-236446.5716, 0.0690)
## Group probs = (0.7248, 0.1958, 0.0794)
##
## Outer iteration: 18
## Iteration: 1 (-236698.5918, 0.1301)
## Iteration: 10 (-236693.1838, 0.0686)
## Iteration: 20 (-236687.2954, 0.0680)
## Iteration: 30 (-236681.5048, 0.0673)
## Iteration: 40 (-236675.8068, 0.0666)
## Iteration: 50 (-236670.1979, 0.0659)
## Group probs = (0.7236, 0.1978, 0.0786)
##
## Outer iteration: 19
## Iteration: 1 (-236525.9249, 0.5143)
## Iteration: 10 (-236520.6282, 0.0657)
## Iteration: 20 (-236515.0684, 0.0650)
## Iteration: 30 (-236509.6184, 0.0643)
## Iteration: 40 (-236504.2569, 0.0636)
## Iteration: 50 (-236498.9768, 0.0630)
## Group probs = (0.7236, 0.1988, 0.0776)
##
## Outer iteration: 20
## Iteration: 1 (-236487.3495, 0.0744)
## Iteration: 10 (-236482.3791, 0.0633)
## Iteration: 20 (-236477.0230, 0.0630)
## Iteration: 30 (-236471.7564, 0.0624)
## Iteration: 40 (-236466.5705, 0.0618)
## Iteration: 50 (-236461.4608, 0.0612)
## Group probs = (0.7209, 0.2021, 0.0770)
##
## Outer iteration: 21
## Iteration: 1 (-235631.6423, 0.6913)
## Iteration: 10 (-235626.6215, 0.0621)
## Iteration: 20 (-235621.3643, 0.0615)
## Iteration: 30 (-235616.2231, 0.0609)
## Iteration: 40 (-235611.1700, 0.0603)
## Iteration: 50 (-235606.1948, 0.0597)
## Group probs = (0.7204, 0.2026, 0.0770)
##
## Outer iteration: 22
## Iteration: 1 (-235343.7425, 0.1025)
## Iteration: 10 (-235339.2874, 0.0590)
## Iteration: 20 (-235334.4288, 0.0584)
## Iteration: 30 (-235329.6382, 0.0579)
## Iteration: 40 (-235324.9115, 0.0574)
## Iteration: 50 (-235320.2464, 0.0569)
## Group probs = (0.7191, 0.2025, 0.0784)
##
## Outer iteration: 23
```

```
## Iteration: 1 (-234325.1190, 0.5319)
## Iteration: 10 (-234320.7971, 0.0567)
## Iteration: 20 (-234316.2679, 0.0558)
## Iteration: 30 (-234311.8070, 0.0552)
## Iteration: 40 (-234307.4038, 0.0547)
## Iteration: 50 (-234303.0554, 0.0542)
## Group probs = (0.7168, 0.2034, 0.0798)
##
## Outer iteration: 24
## Iteration: 1 (-233078.9513, 0.0907)
## Iteration: 10 (-233074.8558, 0.0542)
## Iteration: 20 (-233070.5355, 0.0534)
## Iteration: 30 (-233066.2782, 0.0529)
## Iteration: 40 (-233062.0734, 0.0524)
## Iteration: 50 (-233057.9185, 0.0520)
## Group probs = (0.7169, 0.2047, 0.0784)
##
## Outer iteration: 25
## Iteration: 1 (-233731.5444, 0.8910)
## Iteration: 10 (-233727.4142, 0.0522)
## Iteration: 20 (-233723.2399, 0.0518)
## Iteration: 30 (-233719.1453, 0.0513)
## Iteration: 40 (-233715.1069, 0.0509)
## Iteration: 50 (-233711.1181, 0.0505)
## Group probs = (0.7183, 0.2033, 0.0784)
##
## Outer iteration: 26
## Iteration: 1 (-234113.8302, 0.3654)
## Iteration: 10 (-234110.1125, 0.0503)
## Iteration: 20 (-234106.1466, 0.0501)
## Iteration: 30 (-234102.2362, 0.0497)
## Iteration: 40 (-234098.3708, 0.0494)
## Iteration: 50 (-234094.5476, 0.0490)
## Group probs = (0.7189, 0.2029, 0.0782)
##
## Outer iteration: 27
## Iteration: 1 (-234316.8291, 0.1906)
## Iteration: 10 (-234313.4363, 0.0483)
## Iteration: 20 (-234309.7122, 0.0480)
## Iteration: 30 (-234306.0277, 0.0477)
## Iteration: 40 (-234302.3810, 0.0473)
## Iteration: 50 (-234298.7711, 0.0470)
## Group probs = (0.7173, 0.2032, 0.0795)
##
## Outer iteration: 28
## Iteration: 1 (-233157.2543, 0.4318)
## Iteration: 10 (-233153.5727, 0.0483)
## Iteration: 20 (-233149.8731, 0.0476)
## Iteration: 30 (-233146.2414, 0.0471)
## Iteration: 40 (-233142.6581, 0.0467)
## Iteration: 50 (-233139.1172, 0.0462)
## Group probs = (0.7194, 0.2017, 0.0788)
##
## Outer iteration: 29
```

```
## Iteration: 1 (-233992.0688, 0.0905)
## Iteration: 10 (-233988.7428, 0.0457)
## Iteration: 20 (-233985.2332, 0.0454)
## Iteration: 30 (-233981.7839, 0.0451)
## Iteration: 40 (-233978.3781, 0.0448)
## Iteration: 50 (-233975.0100, 0.0444)
## Group probs = (0.7169, 0.2017, 0.0813)
##
## Outer iteration: 30
## Iteration: 1 (-232044.4820, 1.0290)
## Iteration: 10 (-232040.5329, 0.0465)
## Iteration: 20 (-232037.0706, 0.0451)
## Iteration: 30 (-232033.7140, 0.0444)
## Iteration: 40 (-232030.4166, 0.0438)
## Iteration: 50 (-232027.1656, 0.0434)
## Group probs = (0.7168, 0.2043, 0.0789)
##
## Outer iteration: 31
## Iteration: 1 (-232716.0743, 0.9599)
## Iteration: 10 (-232712.7278, 0.0434)
## Iteration: 20 (-232709.4337, 0.0431)
## Iteration: 30 (-232706.2020, 0.0428)
## Iteration: 40 (-232703.0091, 0.0426)
## Iteration: 50 (-232699.8493, 0.0423)
## Group probs = (0.7157, 0.2054, 0.0789)
##
## Outer iteration: 32
## Iteration: 1 (-232254.2804, 0.1493)
## Iteration: 10 (-232251.3690, 0.0421)
## Iteration: 20 (-232248.2300, 0.0418)
## Iteration: 30 (-232245.1287, 0.0415)
## Iteration: 40 (-232242.0580, 0.0412)
## Iteration: 50 (-232239.0153, 0.0410)
## Group probs = (0.7157, 0.2058, 0.0785)
##
## Outer iteration: 33
## Iteration: 1 (-232289.3288, 0.1838)
## Iteration: 10 (-232286.5511, 0.0409)
## Iteration: 20 (-232283.5487, 0.0408)
## Iteration: 30 (-232280.5804, 0.0405)
## Iteration: 40 (-232277.6403, 0.0402)
## Iteration: 50 (-232274.7266, 0.0400)
## Group probs = (0.7161, 0.2039, 0.0800)
##
## Outer iteration: 34
## Iteration: 1 (-231684.3819, 0.8578)
## Iteration: 10 (-231680.8796, 0.0409)
## Iteration: 20 (-231677.8264, 0.0402)
## Iteration: 30 (-231674.8843, 0.0397)
## Iteration: 40 (-231671.9958, 0.0393)
## Iteration: 50 (-231669.1456, 0.0390)
## Group probs = (0.7138, 0.2074, 0.0788)
##
## Outer iteration: 35
```

```
## Iteration: 1 (-231180.9734, 0.7774)
## Iteration: 10 (-231177.9750, 0.0395)
## Iteration: 20 (-231175.0233, 0.0393)
## Iteration: 30 (-231172.1415, 0.0390)
## Iteration: 40 (-231169.2980, 0.0387)
## Iteration: 50 (-231166.4845, 0.0384)
## Group probs = (0.7121, 0.2082, 0.0797)
##
## Outer iteration: 36
## Iteration: 1 (-230154.6610, 0.2515)
## Iteration: 10 (-230151.9553, 0.0390)
## Iteration: 20 (-230149.1198, 0.0386)
## Iteration: 30 (-230146.3207, 0.0383)
## Iteration: 40 (-230143.5505, 0.0380)
## Iteration: 50 (-230140.8069, 0.0378)
## Group probs = (0.7121, 0.2098, 0.0781)
##
## Outer iteration: 37
## Iteration: 1 (-230620.4195, 0.6026)
## Iteration: 10 (-230617.5878, 0.0375)
## Iteration: 20 (-230614.8214, 0.0373)
## Iteration: 30 (-230612.1109, 0.0370)
## Iteration: 40 (-230609.4316, 0.0368)
## Iteration: 50 (-230606.7774, 0.0366)
## Group probs = (0.7146, 0.2093, 0.0761)
##
## Outer iteration: 38
## Iteration: 1 (-232108.4083, 0.4860)
## Iteration: 10 (-232105.7273, 0.0365)
## Iteration: 20 (-232103.0281, 0.0364)
## Iteration: 30 (-232100.3688, 0.0363)
## Iteration: 40 (-232097.7353, 0.0361)
## Iteration: 50 (-232095.1240, 0.0359)
## Group probs = (0.7153, 0.2099, 0.0748)
##
## Outer iteration: 39
## Iteration: 1 (-232830.6038, 0.3855)
## Iteration: 10 (-232827.8911, 0.0360)
## Iteration: 20 (-232825.2624, 0.0357)
## Iteration: 30 (-232822.6860, 0.0354)
## Iteration: 40 (-232820.1401, 0.0352)
## Iteration: 50 (-232817.6189, 0.0350)
## Group probs = (0.7153, 0.2088, 0.0759)
##
## Outer iteration: 40
## Iteration: 1 (-232418.6398, 0.4221)
## Iteration: 10 (-232416.2515, 0.0348)
## Iteration: 20 (-232413.7444, 0.0345)
## Iteration: 30 (-232411.2660, 0.0343)
## Iteration: 40 (-232408.8079, 0.0342)
## Iteration: 50 (-232406.3679, 0.0340)
## Group probs = (0.7132, 0.2110, 0.0758)
##
## Outer iteration: 1
```

```
## Iteration: 1 (-249804.6115, Inf)
## Iteration: 10 (-226444.6784, 5.1164)
## Iteration: 20 (-224111.2708, 2.3950)
## Iteration: 30 (-223124.1181, 1.6021)
## Iteration: 40 (-222530.0953, 1.2207)
## Iteration: 50 (-222118.4427, 0.9924)
## Group probs = (0.6977, 0.2160, 0.0863)
##
## Outer iteration: 2
## Iteration: 1 (-228394.0058, 3.4817)
## Iteration: 10 (-228178.6857, 0.7611)
## Iteration: 20 (-227994.1280, 0.6556)
## Iteration: 30 (-227843.9768, 0.5793)
## Iteration: 40 (-227718.3479, 0.5200)
## Iteration: 50 (-227611.0893, 0.4722)
## Group probs = (0.7086, 0.2054, 0.0860)
##
## Outer iteration: 3
## Iteration: 1 (-231258.7719, 2.7420)
## Iteration: 10 (-231173.0699, 0.4302)
## Iteration: 20 (-231091.0568, 0.3972)
## Iteration: 30 (-231018.4194, 0.3691)
## Iteration: 40 (-230953.3673, 0.3447)
## Iteration: 50 (-230894.6285, 0.3235)
## Group probs = (0.7150, 0.2011, 0.0839)
##
## Outer iteration: 4
## Iteration: 1 (-233516.5151, 0.7486)
## Iteration: 10 (-233466.9225, 0.3055)
## Iteration: 20 (-233416.9643, 0.2897)
## Iteration: 30 (-233371.1065, 0.2750)
## Iteration: 40 (-233328.7750, 0.2617)
## Iteration: 50 (-233289.5243, 0.2495)
## Group probs = (0.7200, 0.1965, 0.0834)
##
## Outer iteration: 5
## Iteration: 1 (-234993.4901, 1.0404)
## Iteration: 10 (-234959.6514, 0.2380)
## Iteration: 20 (-234925.1560, 0.2283)
## Iteration: 30 (-234892.9344, 0.2191)
## Iteration: 40 (-234862.6885, 0.2106)
## Iteration: 50 (-234834.2062, 0.2028)
## Group probs = (0.7234, 0.1935, 0.0831)
##
## Outer iteration: 6
## Iteration: 1 (-235934.7891, 0.7110)
## Iteration: 10 (-235909.6375, 0.1962)
## Iteration: 20 (-235883.6429, 0.1896)
## Iteration: 30 (-235859.0697, 0.1833)
## Iteration: 40 (-235835.7499, 0.1774)
## Iteration: 50 (-235813.5662, 0.1719)
## Group probs = (0.7229, 0.1946, 0.0825)
##
## Outer iteration: 7
```

```
## Iteration: 1 (-235436.8394, 0.2495)
## Iteration: 10 (-235416.8635, 0.1696)
## Iteration: 20 (-235395.7756, 0.1648)
## Iteration: 30 (-235375.6527, 0.1601)
## Iteration: 40 (-235356.4081, 0.1556)
## Iteration: 50 (-235337.9725, 0.1514)
## Group probs = (0.7276, 0.1933, 0.0792)
##
## Outer iteration: 8
## Iteration: 1 (-237885.6826, 0.3427)
## Iteration: 10 (-237869.0496, 0.1464)
## Iteration: 20 (-237851.8247, 0.1434)
## Iteration: 30 (-237835.2963, 0.1401)
## Iteration: 40 (-237819.3929, 0.1368)
## Iteration: 50 (-237804.0691, 0.1336)
## Group probs = (0.7280, 0.1930, 0.0791)
##
## Outer iteration: 9
## Iteration: 1 (-237681.3071, 0.4833)
## Iteration: 10 (-237667.6408, 0.1313)
## Iteration: 20 (-237653.0683, 0.1285)
## Iteration: 30 (-237639.0025, 0.1257)
## Iteration: 40 (-237625.4049, 0.1230)
## Iteration: 50 (-237612.2462, 0.1204)
## Group probs = (0.7264, 0.1944, 0.0792)
##
## Outer iteration: 10
## Iteration: 1 (-236730.3066, 0.1466)
## Iteration: 10 (-236718.3906, 0.1196)
## Iteration: 20 (-236705.6413, 0.1171)
## Iteration: 30 (-236693.2938, 0.1148)
## Iteration: 40 (-236681.3188, 0.1126)
## Iteration: 50 (-236669.6942, 0.1104)
## Group probs = (0.7265, 0.1956, 0.0778)
##
## Outer iteration: 11
## Iteration: 1 (-237050.6525, 0.4731)
## Iteration: 10 (-237040.2009, 0.1089)
## Iteration: 20 (-237028.9675, 0.1072)
## Iteration: 30 (-237018.0474, 0.1053)
## Iteration: 40 (-237007.4220, 0.1035)
## Iteration: 50 (-236997.0763, 0.1017)
## Group probs = (0.7272, 0.1960, 0.0768)
##
## Outer iteration: 12
## Iteration: 1 (-237501.1784, 0.2085)
## Iteration: 10 (-237491.9389, 0.1001)
## Iteration: 20 (-237481.9739, 0.0986)
## Iteration: 30 (-237472.2603, 0.0971)
## Iteration: 40 (-237462.7844, 0.0956)
## Iteration: 50 (-237453.5352, 0.0941)
## Group probs = (0.7283, 0.1940, 0.0777)
##
## Outer iteration: 13
```

```
## Iteration: 1 (-237488.0562, 0.7811)
## Iteration: 10 (-237479.8213, 0.0918)
## Iteration: 20 (-237471.1191, 0.0902)
## Iteration: 30 (-237462.6420, 0.0887)
## Iteration: 40 (-237454.3613, 0.0874)
## Iteration: 50 (-237446.2636, 0.0861)
## Group probs = (0.7295, 0.1929, 0.0776)
##
## Outer iteration: 14
## Iteration: 1 (-237622.2766, 0.4432)
## Iteration: 10 (-237614.5796, 0.0861)
## Iteration: 20 (-237606.5505, 0.0848)
## Iteration: 30 (-237598.7367, 0.0836)
## Iteration: 40 (-237591.1012, 0.0823)
## Iteration: 50 (-237583.6289, 0.0812)
## Group probs = (0.7301, 0.1927, 0.0772)
##
## Outer iteration: 15
## Iteration: 1 (-237668.7889, 0.4098)
## Iteration: 10 (-237662.0680, 0.0800)
## Iteration: 20 (-237654.8447, 0.0790)
## Iteration: 30 (-237647.7791, 0.0779)
## Iteration: 40 (-237640.8556, 0.0769)
## Iteration: 50 (-237634.0659, 0.0759)
## Group probs = (0.7301, 0.1925, 0.0774)
##
## Outer iteration: 16
## Iteration: 1 (-237164.9799, 0.5694)
## Iteration: 10 (-237158.2751, 0.0768)
## Iteration: 20 (-237151.4694, 0.0755)
## Iteration: 30 (-237144.8558, 0.0743)
## Iteration: 40 (-237138.3898, 0.0733)
## Iteration: 50 (-237132.0544, 0.0723)
## Group probs = (0.7278, 0.1955, 0.0767)
##
## Outer iteration: 17
## Iteration: 1 (-236335.5373, 0.5408)
## Iteration: 10 (-236329.5246, 0.0725)
## Iteration: 20 (-236323.1662, 0.0715)
## Iteration: 30 (-236316.9454, 0.0707)
## Iteration: 40 (-236310.8402, 0.0698)
## Iteration: 50 (-236304.8423, 0.0691)
## Group probs = (0.7271, 0.1967, 0.0763)
##
## Outer iteration: 18
## Iteration: 1 (-236070.6534, 0.1340)
## Iteration: 10 (-236065.2469, 0.0687)
## Iteration: 20 (-236059.3541, 0.0679)
## Iteration: 30 (-236053.5612, 0.0672)
## Iteration: 40 (-236047.8631, 0.0665)
## Iteration: 50 (-236042.2563, 0.0658)
## Group probs = (0.7243, 0.1991, 0.0767)
##
## Outer iteration: 19
```

```
## Iteration: 1 (-234856.1077, 0.2249)
## Iteration: 10 (-234850.8546, 0.0659)
## Iteration: 20 (-234845.2805, 0.0650)
## Iteration: 30 (-234839.8168, 0.0643)
## Iteration: 40 (-234834.4441, 0.0636)
## Iteration: 50 (-234829.1554, 0.0630)
## Group probs = (0.7247, 0.1998, 0.0755)
##
## Outer iteration: 20
## Iteration: 1 (-235263.3652, 0.2535)
## Iteration: 10 (-235258.5189, 0.0627)
## Iteration: 20 (-235253.2658, 0.0623)
## Iteration: 30 (-235248.0954, 0.0617)
## Iteration: 40 (-235243.0017, 0.0611)
## Iteration: 50 (-235237.9815, 0.0605)
## Group probs = (0.7210, 0.2029, 0.0761)
##
## Outer iteration: 21
## Iteration: 1 (-233829.7623, 0.5983)
## Iteration: 10 (-233824.6697, 0.0614)
## Iteration: 20 (-233819.5223, 0.0605)
## Iteration: 30 (-233814.5050, 0.0598)
## Iteration: 40 (-233809.5760, 0.0592)
## Iteration: 50 (-233804.7231, 0.0586)
## Group probs = (0.7211, 0.2018, 0.0771)
##
## Outer iteration: 22
## Iteration: 1 (-233616.4819, 0.2307)
## Iteration: 10 (-233612.1021, 0.0579)
## Iteration: 20 (-233607.3849, 0.0573)
## Iteration: 30 (-233602.7357, 0.0568)
## Iteration: 40 (-233598.1481, 0.0563)
## Iteration: 50 (-233593.6196, 0.0558)
## Group probs = (0.7207, 0.2018, 0.0775)
##
## Outer iteration: 23
## Iteration: 1 (-233410.0676, 0.0683)
## Iteration: 10 (-233405.9954, 0.0557)
## Iteration: 20 (-233401.5348, 0.0552)
## Iteration: 30 (-233397.1305, 0.0547)
## Iteration: 40 (-233392.7808, 0.0542)
## Iteration: 50 (-233388.4841, 0.0538)
## Group probs = (0.7215, 0.2010, 0.0775)
##
## Outer iteration: 24
## Iteration: 1 (-233703.8081, 0.2622)
## Iteration: 10 (-233700.0437, 0.0526)
## Iteration: 20 (-233695.9264, 0.0521)
## Iteration: 30 (-233691.8591, 0.0517)
## Iteration: 40 (-233687.8392, 0.0513)
## Iteration: 50 (-233683.8650, 0.0509)
## Group probs = (0.7209, 0.2013, 0.0778)
##
## Outer iteration: 25
```

```
## Iteration: 1 (-233335.6653, 0.0892)
## Iteration: 10 (-233331.9596, 0.0513)
## Iteration: 20 (-233327.9282, 0.0510)
## Iteration: 30 (-233323.9450, 0.0506)
## Iteration: 40 (-233320.0075, 0.0502)
## Iteration: 50 (-233316.1141, 0.0499)
## Group probs = (0.7203, 0.2028, 0.0769)
##
## Outer iteration: 26
## Iteration: 1 (-233357.6129, 0.4082)
## Iteration: 10 (-233353.9510, 0.0500)
## Iteration: 20 (-233350.0364, 0.0497)
## Iteration: 30 (-233346.1786, 0.0493)
## Iteration: 40 (-233342.3672, 0.0490)
## Iteration: 50 (-233338.5987, 0.0486)
## Group probs = (0.7182, 0.2041, 0.0777)
##
## Outer iteration: 27
## Iteration: 1 (-232385.5521, 0.0765)
## Iteration: 10 (-232382.1054, 0.0483)
## Iteration: 20 (-232378.4208, 0.0478)
## Iteration: 30 (-232374.7867, 0.0474)
## Iteration: 40 (-232371.1937, 0.0470)
## Iteration: 50 (-232367.6384, 0.0467)
## Group probs = (0.7190, 0.2047, 0.0763)
##
## Outer iteration: 28
## Iteration: 1 (-233069.8865, 0.3756)
## Iteration: 10 (-233066.4730, 0.0465)
## Iteration: 20 (-233062.9135, 0.0463)
## Iteration: 30 (-233059.4056, 0.0460)
## Iteration: 40 (-233055.9371, 0.0457)
## Iteration: 50 (-233052.5044, 0.0454)
## Group probs = (0.7190, 0.2059, 0.0751)
##
## Outer iteration: 29
## Iteration: 1 (-233376.0277, 0.4059)
## Iteration: 10 (-233372.7241, 0.0456)
## Iteration: 20 (-233369.2278, 0.0454)
## Iteration: 30 (-233365.7831, 0.0452)
## Iteration: 40 (-233362.3781, 0.0449)
## Iteration: 50 (-233359.0087, 0.0446)
## Group probs = (0.7168, 0.2073, 0.0759)
##
## Outer iteration: 30
## Iteration: 1 (-232369.1484, 0.2287)
## Iteration: 10 (-232365.9287, 0.0451)
## Iteration: 20 (-232362.4835, 0.0447)
## Iteration: 30 (-232359.0836, 0.0444)
## Iteration: 40 (-232355.7207, 0.0441)
## Iteration: 50 (-232352.3916, 0.0438)
## Group probs = (0.7172, 0.2075, 0.0753)
##
## Outer iteration: 31
```

```
## Iteration: 1 (-232635.4474, 0.0742)
## Iteration: 10 (-232632.4851, 0.0433)
## Iteration: 20 (-232629.2472, 0.0431)
## Iteration: 30 (-232626.0406, 0.0428)
## Iteration: 40 (-232622.8632, 0.0426)
## Iteration: 50 (-232619.7140, 0.0423)
## Group probs = (0.7144, 0.2095, 0.0761)
##
## Outer iteration: 32
## Iteration: 1 (-231407.9652, 0.4490)
## Iteration: 10 (-231404.8184, 0.0433)
## Iteration: 20 (-231401.5247, 0.0428)
## Iteration: 30 (-231398.2819, 0.0425)
## Iteration: 40 (-231395.0761, 0.0422)
## Iteration: 50 (-231391.9028, 0.0420)
## Group probs = (0.7124, 0.2093, 0.0783)
##
## Outer iteration: 33
## Iteration: 1 (-230039.4321, 0.6758)
## Iteration: 10 (-230036.2628, 0.0422)
## Iteration: 20 (-230033.1735, 0.0414)
## Iteration: 30 (-230030.1328, 0.0409)
## Iteration: 40 (-230027.1228, 0.0406)
## Iteration: 50 (-230024.1403, 0.0403)
## Group probs = (0.7121, 0.2104, 0.0775)
##
## Outer iteration: 34
## Iteration: 1 (-230212.3303, 0.5324)
## Iteration: 10 (-230209.5069, 0.0405)
## Iteration: 20 (-230206.4986, 0.0402)
## Iteration: 30 (-230203.5265, 0.0400)
## Iteration: 40 (-230200.5823, 0.0398)
## Iteration: 50 (-230197.6637, 0.0395)
## Group probs = (0.7110, 0.2110, 0.0780)
##
## Outer iteration: 35
## Iteration: 1 (-229858.3806, 0.1114)
## Iteration: 10 (-229855.6905, 0.0392)
## Iteration: 20 (-229852.8176, 0.0389)
## Iteration: 30 (-229849.9799, 0.0386)
## Iteration: 40 (-229847.1688, 0.0384)
## Iteration: 50 (-229844.3815, 0.0382)
## Group probs = (0.7109, 0.2116, 0.0774)
##
## Outer iteration: 36
## Iteration: 1 (-230227.6685, 0.5698)
## Iteration: 10 (-230224.6681, 0.0386)
## Iteration: 20 (-230221.7728, 0.0382)
## Iteration: 30 (-230218.9550, 0.0379)
## Iteration: 40 (-230216.1804, 0.0375)
## Iteration: 50 (-230213.4390, 0.0373)
## Group probs = (0.7085, 0.2122, 0.0794)
##
## Outer iteration: 37
```

```

## Iteration: 1 (-228718.7749, 0.3550)
## Iteration: 10 (-228716.0525, 0.0380)
## Iteration: 20 (-228713.3044, 0.0376)
## Iteration: 30 (-228710.5926, 0.0373)
## Iteration: 40 (-228707.9058, 0.0370)
## Iteration: 50 (-228705.2409, 0.0368)
## Group probs = (0.7083, 0.2120, 0.0797)
##
## Outer iteration: 38
## Iteration: 1 (-228546.8262, 0.1523)
## Iteration: 10 (-228544.3751, 0.0369)
## Iteration: 20 (-228541.7221, 0.0367)
## Iteration: 30 (-228539.0943, 0.0364)
## Iteration: 40 (-228536.4878, 0.0362)
## Iteration: 50 (-228533.9012, 0.0360)
## Group probs = (0.7086, 0.2122, 0.0792)
##
## Outer iteration: 39
## Iteration: 1 (-228778.1277, 0.1947)
## Iteration: 10 (-228775.7856, 0.0359)
## Iteration: 20 (-228773.2142, 0.0358)
## Iteration: 30 (-228770.6626, 0.0356)
## Iteration: 40 (-228768.1294, 0.0354)
## Iteration: 50 (-228765.6143, 0.0352)
## Group probs = (0.7074, 0.2132, 0.0794)
##
## Outer iteration: 40
## Iteration: 1 (-228278.0743, 0.0440)
## Iteration: 10 (-228275.7767, 0.0353)
## Iteration: 20 (-228273.2702, 0.0350)
## Iteration: 30 (-228270.7850, 0.0348)
## Iteration: 40 (-228268.3181, 0.0347)
## Iteration: 50 (-228265.8684, 0.0345)
## Group probs = (0.7091, 0.2133, 0.0776)
##
## Outer iteration: 1
## Iteration: 1 (-248915.8066, Inf)
## Iteration: 10 (-225692.5394, 5.1139)
## Iteration: 20 (-223374.4884, 2.3941)
## Iteration: 30 (-222391.9496, 1.6025)
## Iteration: 40 (-221800.0872, 1.2214)
## Iteration: 50 (-221389.6738, 0.9933)
## Group probs = (0.6942, 0.2194, 0.0864)
##
## Outer iteration: 2
## Iteration: 1 (-227725.1253, 2.8786)
## Iteration: 10 (-227511.7531, 0.7608)
## Iteration: 20 (-227328.3042, 0.6557)
## Iteration: 30 (-227178.9137, 0.5796)
## Iteration: 40 (-227053.8345, 0.5204)
## Iteration: 50 (-226946.9840, 0.4727)
## Group probs = (0.7042, 0.2093, 0.0865)
##
## Outer iteration: 3

```

```
## Iteration: 1 (-230575.0378, 1.9615)
## Iteration: 10 (-230490.5030, 0.4313)
## Iteration: 20 (-230408.8004, 0.3987)
## Iteration: 30 (-230336.3215, 0.3707)
## Iteration: 40 (-230271.3696, 0.3464)
## Iteration: 50 (-230212.6985, 0.3252)
## Group probs = (0.7105, 0.2042, 0.0853)
##
## Outer iteration: 4
## Iteration: 1 (-232596.4464, 1.0391)
## Iteration: 10 (-232546.1109, 0.3086)
## Iteration: 20 (-232495.4763, 0.2928)
## Iteration: 30 (-232449.0090, 0.2779)
## Iteration: 40 (-232406.1190, 0.2644)
## Iteration: 50 (-232366.3517, 0.2521)
## Group probs = (0.7133, 0.2025, 0.0842)
##
## Outer iteration: 5
## Iteration: 1 (-233561.2756, 0.3860)
## Iteration: 10 (-233527.1531, 0.2417)
## Iteration: 20 (-233491.8245, 0.2321)
## Iteration: 30 (-233458.7429, 0.2229)
## Iteration: 40 (-233427.6645, 0.2142)
## Iteration: 50 (-233398.3872, 0.2063)
## Group probs = (0.7163, 0.1996, 0.0840)
##
## Outer iteration: 6
## Iteration: 1 (-234482.5421, 0.6027)
## Iteration: 10 (-234457.3008, 0.1981)
## Iteration: 20 (-234430.9488, 0.1916)
## Iteration: 30 (-234405.9908, 0.1853)
## Iteration: 40 (-234382.2842, 0.1794)
## Iteration: 50 (-234359.7186, 0.1739)
## Group probs = (0.7183, 0.1991, 0.0826)
##
## Outer iteration: 7
## Iteration: 1 (-235257.4632, 0.2488)
## Iteration: 10 (-235237.2970, 0.1701)
## Iteration: 20 (-235216.0337, 0.1658)
## Iteration: 30 (-235195.7239, 0.1612)
## Iteration: 40 (-235176.2839, 0.1568)
## Iteration: 50 (-235157.6474, 0.1526)
## Group probs = (0.7180, 0.1988, 0.0832)
##
## Outer iteration: 8
## Iteration: 1 (-234796.8719, 0.1713)
## Iteration: 10 (-234780.2134, 0.1500)
## Iteration: 20 (-234762.5246, 0.1462)
## Iteration: 30 (-234745.5263, 0.1426)
## Iteration: 40 (-234729.1651, 0.1392)
## Iteration: 50 (-234713.3980, 0.1359)
## Group probs = (0.7171, 0.1991, 0.0838)
##
## Outer iteration: 9
```

```
## Iteration: 1 (-234154.8395, 0.2222)
## Iteration: 10 (-234140.9842, 0.1333)
## Iteration: 20 (-234126.1430, 0.1302)
## Iteration: 30 (-234111.8043, 0.1273)
## Iteration: 40 (-234097.9355, 0.1246)
## Iteration: 50 (-234084.5092, 0.1220)
## Group probs = (0.7190, 0.1986, 0.0825)
##
## Outer iteration: 10
## Iteration: 1 (-235130.5509, 0.2389)
## Iteration: 10 (-235118.5680, 0.1195)
## Iteration: 20 (-235105.7431, 0.1175)
## Iteration: 30 (-235093.3073, 0.1153)
## Iteration: 40 (-235081.2362, 0.1132)
## Iteration: 50 (-235069.5101, 0.1111)
## Group probs = (0.7212, 0.1974, 0.0814)
##
## Outer iteration: 11
## Iteration: 1 (-236263.6002, 0.1461)
## Iteration: 10 (-236253.1481, 0.1082)
## Iteration: 20 (-236241.9970, 0.1065)
## Iteration: 30 (-236231.1616, 0.1048)
## Iteration: 40 (-236220.6178, 0.1030)
## Iteration: 50 (-236210.3490, 0.1013)
## Group probs = (0.7188, 0.1998, 0.0814)
##
## Outer iteration: 12
## Iteration: 1 (-235401.3204, 0.5614)
## Iteration: 10 (-235391.6407, 0.1019)
## Iteration: 20 (-235381.4146, 0.1002)
## Iteration: 30 (-235371.4805, 0.0986)
## Iteration: 40 (-235361.7985, 0.0970)
## Iteration: 50 (-235352.3506, 0.0955)
## Group probs = (0.7178, 0.2004, 0.0818)
##
## Outer iteration: 13
## Iteration: 1 (-234716.7195, 0.3336)
## Iteration: 10 (-234708.2274, 0.0944)
## Iteration: 20 (-234699.0607, 0.0929)
## Iteration: 30 (-234690.1064, 0.0916)
## Iteration: 40 (-234681.3524, 0.0902)
## Iteration: 50 (-234672.7898, 0.0889)
## Group probs = (0.7186, 0.1983, 0.0832)
##
## Outer iteration: 14
## Iteration: 1 (-234407.5097, 0.8026)
## Iteration: 10 (-234399.1241, 0.0886)
## Iteration: 20 (-234390.7840, 0.0868)
## Iteration: 30 (-234382.7088, 0.0853)
## Iteration: 40 (-234374.8297, 0.0840)
## Iteration: 50 (-234367.1233, 0.0828)
## Group probs = (0.7180, 0.1987, 0.0833)
##
## Outer iteration: 15
```

```
## Iteration: 1 (-233968.4974, 0.1387)
## Iteration: 10 (-233961.6299, 0.0820)
## Iteration: 20 (-233954.1721, 0.0808)
## Iteration: 30 (-233946.8654, 0.0797)
## Iteration: 40 (-233939.7009, 0.0786)
## Iteration: 50 (-233932.6723, 0.0776)
## Group probs = (0.7175, 0.1992, 0.0833)
##
## Outer iteration: 16
## Iteration: 1 (-233605.0735, 0.2098)
## Iteration: 10 (-233598.6980, 0.0773)
## Iteration: 20 (-233591.7969, 0.0763)
## Iteration: 30 (-233585.0282, 0.0753)
## Iteration: 40 (-233578.3834, 0.0744)
## Iteration: 50 (-233571.8572, 0.0735)
## Group probs = (0.7148, 0.2031, 0.0821)
##
## Outer iteration: 17
## Iteration: 1 (-232946.8158, 0.9827)
## Iteration: 10 (-232940.1655, 0.0746)
## Iteration: 20 (-232933.4616, 0.0736)
## Iteration: 30 (-232926.9509, 0.0727)
## Iteration: 40 (-232920.5758, 0.0718)
## Iteration: 50 (-232914.3182, 0.0709)
## Group probs = (0.7123, 0.2038, 0.0839)
##
## Outer iteration: 18
## Iteration: 1 (-231442.5424, 0.2940)
## Iteration: 10 (-231436.7100, 0.0708)
## Iteration: 20 (-231430.5819, 0.0696)
## Iteration: 30 (-231424.5657, 0.0687)
## Iteration: 40 (-231418.6483, 0.0680)
## Iteration: 50 (-231412.8251, 0.0672)
## Group probs = (0.7137, 0.2043, 0.0820)
##
## Outer iteration: 19
## Iteration: 1 (-232498.4995, 0.3902)
## Iteration: 10 (-232493.1391, 0.0664)
## Iteration: 20 (-232487.4345, 0.0660)
## Iteration: 30 (-232481.8267, 0.0653)
## Iteration: 40 (-232476.3054, 0.0647)
## Iteration: 50 (-232470.8664, 0.0641)
## Group probs = (0.7117, 0.2062, 0.0821)
##
## Outer iteration: 20
## Iteration: 1 (-231734.6318, 0.4934)
## Iteration: 10 (-231729.4679, 0.0648)
## Iteration: 20 (-231723.9162, 0.0642)
## Iteration: 30 (-231718.4642, 0.0636)
## Iteration: 40 (-231713.0980, 0.0630)
## Iteration: 50 (-231707.8119, 0.0623)
## Group probs = (0.7139, 0.2043, 0.0817)
##
## Outer iteration: 21
```

```
## Iteration: 1 (-232557.8593, 0.2487)
## Iteration: 10 (-232552.9968, 0.0614)
## Iteration: 20 (-232547.8444, 0.0609)
## Iteration: 30 (-232542.7874, 0.0604)
## Iteration: 40 (-232537.8063, 0.0598)
## Iteration: 50 (-232532.8947, 0.0592)
## Group probs = (0.7143, 0.2054, 0.0803)
##
## Outer iteration: 22
## Iteration: 1 (-233133.9149, 0.4020)
## Iteration: 10 (-233129.2953, 0.0588)
## Iteration: 20 (-233124.4559, 0.0583)
## Iteration: 30 (-233119.6956, 0.0578)
## Iteration: 40 (-233115.0004, 0.0573)
## Iteration: 50 (-233110.3662, 0.0568)
## Group probs = (0.7120, 0.2057, 0.0823)
##
## Outer iteration: 23
## Iteration: 1 (-231625.8681, 0.3951)
## Iteration: 10 (-231621.4661, 0.0570)
## Iteration: 20 (-231616.8679, 0.0561)
## Iteration: 30 (-231612.3379, 0.0555)
## Iteration: 40 (-231607.8651, 0.0551)
## Iteration: 50 (-231603.4468, 0.0546)
## Group probs = (0.7151, 0.2054, 0.0795)
##
## Outer iteration: 24
## Iteration: 1 (-233512.8948, 0.2208)
## Iteration: 10 (-233508.5998, 0.0538)
## Iteration: 20 (-233504.2816, 0.0536)
## Iteration: 30 (-233500.0333, 0.0532)
## Iteration: 40 (-233495.8373, 0.0528)
## Iteration: 50 (-233491.6903, 0.0524)
## Group probs = (0.7121, 0.2062, 0.0817)
##
## Outer iteration: 25
## Iteration: 1 (-231696.9560, 0.2228)
## Iteration: 10 (-231692.8802, 0.0532)
## Iteration: 20 (-231688.7143, 0.0523)
## Iteration: 30 (-231684.6095, 0.0518)
## Iteration: 40 (-231680.5535, 0.0513)
## Iteration: 50 (-231676.5434, 0.0509)
## Group probs = (0.7124, 0.2072, 0.0804)
##
## Outer iteration: 26
## Iteration: 1 (-232074.2099, 0.2294)
## Iteration: 10 (-232070.5141, 0.0506)
## Iteration: 20 (-232066.5309, 0.0504)
## Iteration: 30 (-232062.5979, 0.0501)
## Iteration: 40 (-232058.7089, 0.0497)
## Iteration: 50 (-232054.8618, 0.0493)
## Group probs = (0.7108, 0.2080, 0.0811)
##
## Outer iteration: 27
```

```
## Iteration: 1 (-231246.4809, 0.0838)
## Iteration: 10 (-231242.9364, 0.0495)
## Iteration: 20 (-231239.1179, 0.0490)
## Iteration: 30 (-231235.3437, 0.0486)
## Iteration: 40 (-231231.6098, 0.0483)
## Iteration: 50 (-231227.9147, 0.0479)
## Group probs = (0.7108, 0.2076, 0.0816)
##
## Outer iteration: 28
## Iteration: 1 (-230817.8347, 0.4454)
## Iteration: 10 (-230814.1349, 0.0485)
## Iteration: 20 (-230810.3500, 0.0481)
## Iteration: 30 (-230806.6328, 0.0476)
## Iteration: 40 (-230802.9651, 0.0472)
## Iteration: 50 (-230799.3410, 0.0469)
## Group probs = (0.7101, 0.2090, 0.0809)
##
## Outer iteration: 29
## Iteration: 1 (-230564.5050, 0.1230)
## Iteration: 10 (-230561.1965, 0.0470)
## Iteration: 20 (-230557.5824, 0.0467)
## Iteration: 30 (-230554.0123, 0.0463)
## Iteration: 40 (-230550.4822, 0.0460)
## Iteration: 50 (-230546.9900, 0.0456)
## Group probs = (0.7107, 0.2084, 0.0808)
##
## Outer iteration: 30
## Iteration: 1 (-230640.9328, 0.4078)
## Iteration: 10 (-230637.8180, 0.0448)
## Iteration: 20 (-230634.4414, 0.0444)
## Iteration: 30 (-230631.1047, 0.0441)
## Iteration: 40 (-230627.8020, 0.0438)
## Iteration: 50 (-230624.5311, 0.0435)
## Group probs = (0.7093, 0.2100, 0.0807)
##
## Outer iteration: 31
## Iteration: 1 (-230261.6553, 0.6357)
## Iteration: 10 (-230258.5670, 0.0436)
## Iteration: 20 (-230255.2733, 0.0433)
## Iteration: 30 (-230252.0198, 0.0430)
## Iteration: 40 (-230248.7982, 0.0427)
## Iteration: 50 (-230245.6062, 0.0424)
## Group probs = (0.7071, 0.2114, 0.0815)
##
## Outer iteration: 32
## Iteration: 1 (-229087.3856, 0.2883)
## Iteration: 10 (-229084.3324, 0.0432)
## Iteration: 20 (-229081.1042, 0.0428)
## Iteration: 30 (-229077.9236, 0.0424)
## Iteration: 40 (-229074.7792, 0.0421)
## Iteration: 50 (-229071.6667, 0.0418)
## Group probs = (0.7060, 0.2105, 0.0835)
##
## Outer iteration: 33
```

```
## Iteration: 1 (-228011.2356, 0.6099)
## Iteration: 10 (-228007.9359, 0.0424)
## Iteration: 20 (-228004.8228, 0.0415)
## Iteration: 30 (-228001.7813, 0.0410)
## Iteration: 40 (-227998.7795, 0.0406)
## Iteration: 50 (-227995.8097, 0.0403)
## Group probs = (0.7054, 0.2120, 0.0826)
##
## Outer iteration: 34
## Iteration: 1 (-227977.3307, 0.3457)
## Iteration: 10 (-227974.5461, 0.0404)
## Iteration: 20 (-227971.5560, 0.0402)
## Iteration: 30 (-227968.6015, 0.0400)
## Iteration: 40 (-227965.6754, 0.0397)
## Iteration: 50 (-227962.7755, 0.0395)
## Group probs = (0.7038, 0.2144, 0.0818)
##
## Outer iteration: 35
## Iteration: 1 (-227539.7876, 0.3717)
## Iteration: 10 (-227536.9469, 0.0399)
## Iteration: 20 (-227533.9640, 0.0397)
## Iteration: 30 (-227531.0327, 0.0394)
## Iteration: 40 (-227528.1358, 0.0392)
## Iteration: 50 (-227525.2679, 0.0390)
## Group probs = (0.7040, 0.2146, 0.0814)
##
## Outer iteration: 36
## Iteration: 1 (-227727.9086, 0.2430)
## Iteration: 10 (-227725.3132, 0.0386)
## Iteration: 20 (-227722.4667, 0.0385)
## Iteration: 30 (-227719.6451, 0.0383)
## Iteration: 40 (-227716.8466, 0.0381)
## Iteration: 50 (-227714.0703, 0.0379)
## Group probs = (0.7032, 0.2143, 0.0824)
##
## Outer iteration: 37
## Iteration: 1 (-227184.8896, 0.2514)
## Iteration: 10 (-227182.3455, 0.0378)
## Iteration: 20 (-227179.6180, 0.0374)
## Iteration: 30 (-227176.9164, 0.0371)
## Iteration: 40 (-227174.2361, 0.0369)
## Iteration: 50 (-227171.5758, 0.0367)
## Group probs = (0.7034, 0.2154, 0.0812)
##
## Outer iteration: 38
## Iteration: 1 (-227662.8150, 0.5043)
## Iteration: 10 (-227660.2097, 0.0368)
## Iteration: 20 (-227657.5273, 0.0367)
## Iteration: 30 (-227654.8833, 0.0365)
## Iteration: 40 (-227652.2640, 0.0363)
## Iteration: 50 (-227649.6662, 0.0361)
## Group probs = (0.7019, 0.2162, 0.0819)
##
## Outer iteration: 39
```

```

## Iteration: 1 (-226912.7923, 0.1428)
## Iteration: 10 (-226910.3438, 0.0364)
## Iteration: 20 (-226907.6958, 0.0362)
## Iteration: 30 (-226905.0734, 0.0360)
## Iteration: 40 (-226902.4725, 0.0358)
## Iteration: 50 (-226899.8915, 0.0356)
## Group probs = (0.7001, 0.2181, 0.0818)
##
## Outer iteration: 40
## Iteration: 1 (-226308.1731, 0.2811)
## Iteration: 10 (-226305.6526, 0.0359)
## Iteration: 20 (-226303.0208, 0.0357)
## Iteration: 30 (-226300.4354, 0.0354)
## Iteration: 40 (-226297.8783, 0.0352)
## Iteration: 50 (-226295.3442, 0.0350)
## Group probs = (0.6998, 0.2181, 0.0821)
##
## CCES_2013
## Outer iteration: 1
## Iteration: 1 (-103221.1083,   Inf)
## Iteration: 10 (-94882.3077, 2.7021)
## Iteration: 20 (-93958.0658, 1.2900)
## Iteration: 30 (-93561.6888, 0.8689)
## Iteration: 40 (-93323.0472, 0.6663)
## Iteration: 50 (-93156.6586, 0.5460)
## Group probs = (0.7959, 0.1759, 0.0282)
##
## Outer iteration: 2
## Iteration: 1 (-95493.1975, 0.5447)
## Iteration: 10 (-95424.7854, 0.3901)
## Iteration: 20 (-95367.2806, 0.3319)
## Iteration: 30 (-95320.8991, 0.2919)
## Iteration: 40 (-95282.3554, 0.2614)
## Iteration: 50 (-95249.6575, 0.2372)
## Group probs = (0.7995, 0.1733, 0.0272)
##
## Outer iteration: 3
## Iteration: 1 (-95795.0504, 0.2722)
## Iteration: 10 (-95766.8626, 0.2242)
## Iteration: 20 (-95739.4583, 0.2079)
## Iteration: 30 (-95715.2846, 0.1935)
## Iteration: 40 (-95693.7558, 0.1809)
## Iteration: 50 (-95674.4271, 0.1699)
## Group probs = (0.8008, 0.1724, 0.0268)
##
## Outer iteration: 4
## Iteration: 1 (-95838.0202, 0.1795)
## Iteration: 10 (-95819.6442, 0.1675)
## Iteration: 20 (-95801.1313, 0.1596)
## Iteration: 30 (-95784.2252, 0.1518)
## Iteration: 40 (-95768.6941, 0.1447)
## Iteration: 50 (-95754.3554, 0.1382)
## Group probs = (0.8020, 0.1716, 0.0264)
##

```

```
## Outer iteration: 5
## Iteration: 1 (-95925.7617, 0.1605)
## Iteration: 10 (-95911.8221, 0.1384)
## Iteration: 20 (-95897.4739, 0.1335)
## Iteration: 30 (-95884.0839, 0.1285)
## Iteration: 40 (-95871.5353, 0.1237)
## Iteration: 50 (-95859.7345, 0.1193)
## Group probs = (0.7992, 0.1739, 0.0268)
##
## Outer iteration: 6
## Iteration: 1 (-95315.1228, 0.2740)
## Iteration: 10 (-95302.4801, 0.1215)
## Iteration: 20 (-95289.6161, 0.1180)
## Iteration: 30 (-95277.5046, 0.1147)
## Iteration: 40 (-95266.0090, 0.1114)
## Iteration: 50 (-95255.0573, 0.1083)
## Group probs = (0.7986, 0.1744, 0.0270)
##
## Outer iteration: 7
## Iteration: 1 (-95100.5015, 0.1289)
## Iteration: 10 (-95089.1481, 0.1122)
## Iteration: 20 (-95077.1737, 0.1094)
## Iteration: 30 (-95065.7241, 0.1066)
## Iteration: 40 (-95054.7422, 0.1040)
## Iteration: 50 (-95044.1867, 0.1014)
## Group probs = (0.7980, 0.1748, 0.0272)
##
## Outer iteration: 8
## Iteration: 1 (-94892.3600, 0.1157)
## Iteration: 10 (-94881.3178, 0.1051)
## Iteration: 20 (-94869.5956, 0.1029)
## Iteration: 30 (-94858.3167, 0.1007)
## Iteration: 40 (-94847.4352, 0.0986)
## Iteration: 50 (-94836.9196, 0.0965)
## Group probs = (0.7963, 0.1761, 0.0276)
##
## Outer iteration: 9
## Iteration: 1 (-94510.8929, 0.1113)
## Iteration: 10 (-94500.3323, 0.0987)
## Iteration: 20 (-94489.0475, 0.0967)
## Iteration: 30 (-94478.1412, 0.0948)
## Iteration: 40 (-94467.5756, 0.0930)
## Iteration: 50 (-94457.3267, 0.0912)
## Group probs = (0.7942, 0.1777, 0.0280)
##
## Outer iteration: 10
## Iteration: 1 (-94071.3752, 0.1528)
## Iteration: 10 (-94061.0699, 0.0932)
## Iteration: 20 (-94050.0713, 0.0915)
## Iteration: 30 (-94039.4311, 0.0899)
## Iteration: 40 (-94029.1069, 0.0884)
## Iteration: 50 (-94019.0749, 0.0869)
## Group probs = (0.7927, 0.1789, 0.0284)
##
```

```
## Outer iteration: 11
## Iteration: 1 (-93734.2222, 0.0937)
## Iteration: 10 (-93724.7072, 0.0877)
## Iteration: 20 (-93714.4675, 0.0861)
## Iteration: 30 (-93704.5229, 0.0846)
## Iteration: 40 (-93694.8490, 0.0832)
## Iteration: 50 (-93685.4299, 0.0818)
## Group probs = (0.7913, 0.1801, 0.0286)
##
## Outer iteration: 12
## Iteration: 1 (-93431.4548, 0.1508)
## Iteration: 10 (-93422.8214, 0.0813)
## Iteration: 20 (-93413.5158, 0.0800)
## Iteration: 30 (-93404.4573, 0.0787)
## Iteration: 40 (-93395.6283, 0.0775)
## Iteration: 50 (-93387.0168, 0.0763)
## Group probs = (0.7912, 0.1800, 0.0287)
##
## Outer iteration: 13
## Iteration: 1 (-93349.5795, 0.1444)
## Iteration: 10 (-93341.6169, 0.0771)
## Iteration: 20 (-93333.0113, 0.0759)
## Iteration: 30 (-93324.6182, 0.0746)
## Iteration: 40 (-93316.4262, 0.0734)
## Iteration: 50 (-93308.4267, 0.0723)
## Group probs = (0.7908, 0.1805, 0.0287)
##
## Outer iteration: 14
## Iteration: 1 (-93227.1830, 0.0859)
## Iteration: 10 (-93220.0121, 0.0716)
## Iteration: 20 (-93212.2270, 0.0705)
## Iteration: 30 (-93204.6205, 0.0695)
## Iteration: 40 (-93197.1849, 0.0685)
## Iteration: 50 (-93189.9135, 0.0675)
## Group probs = (0.7901, 0.1810, 0.0289)
##
## Outer iteration: 15
## Iteration: 1 (-93063.5444, 0.0960)
## Iteration: 10 (-93057.0963, 0.0665)
## Iteration: 20 (-93050.0904, 0.0656)
## Iteration: 30 (-93043.2356, 0.0646)
## Iteration: 40 (-93036.5252, 0.0637)
## Iteration: 50 (-93029.9541, 0.0629)
## Group probs = (0.7892, 0.1820, 0.0288)
##
## Outer iteration: 16
## Iteration: 1 (-92866.7666, 0.1339)
## Iteration: 10 (-92860.8348, 0.0620)
## Iteration: 20 (-92854.4273, 0.0612)
## Iteration: 30 (-92848.1594, 0.0604)
## Iteration: 40 (-92842.0200, 0.0597)
## Iteration: 50 (-92836.0026, 0.0589)
## Group probs = (0.7882, 0.1828, 0.0290)
##
```

```
## Outer iteration: 17
## Iteration: 1 (-92673.6428, 0.0784)
## Iteration: 10 (-92668.3380, 0.0580)
## Iteration: 20 (-92662.5741, 0.0572)
## Iteration: 30 (-92656.9225, 0.0564)
## Iteration: 40 (-92651.3772, 0.0557)
## Iteration: 50 (-92645.9341, 0.0550)
## Group probs = (0.7890, 0.1820, 0.0291)
##
## Outer iteration: 18
## Iteration: 1 (-92754.6767, 0.2095)
## Iteration: 10 (-92749.6862, 0.0556)
## Iteration: 20 (-92744.3238, 0.0547)
## Iteration: 30 (-92739.0670, 0.0539)
## Iteration: 40 (-92733.9057, 0.0532)
## Iteration: 50 (-92728.8357, 0.0525)
## Group probs = (0.7881, 0.1826, 0.0293)
##
## Outer iteration: 19
## Iteration: 1 (-92576.1926, 0.0559)
## Iteration: 10 (-92571.6849, 0.0520)
## Iteration: 20 (-92566.7657, 0.0513)
## Iteration: 30 (-92561.9310, 0.0507)
## Iteration: 40 (-92557.1777, 0.0501)
## Iteration: 50 (-92552.5036, 0.0495)
## Group probs = (0.7874, 0.1831, 0.0294)
##
## Outer iteration: 20
## Iteration: 1 (-92431.7919, 0.0494)
## Iteration: 10 (-92427.5935, 0.0493)
## Iteration: 20 (-92423.0076, 0.0488)
## Iteration: 30 (-92418.4973, 0.0482)
## Iteration: 40 (-92414.0599, 0.0477)
## Iteration: 50 (-92409.6932, 0.0471)
## Group probs = (0.7875, 0.1833, 0.0293)
##
## Outer iteration: 21
## Iteration: 1 (-92427.3523, 0.1355)
## Iteration: 10 (-92423.5067, 0.0461)
## Iteration: 20 (-92419.3248, 0.0456)
## Iteration: 30 (-92415.2096, 0.0452)
## Iteration: 40 (-92411.1571, 0.0447)
## Iteration: 50 (-92407.1652, 0.0443)
## Group probs = (0.7880, 0.1828, 0.0292)
##
## Outer iteration: 22
## Iteration: 1 (-92479.2132, 0.1160)
## Iteration: 10 (-92475.5787, 0.0445)
## Iteration: 20 (-92471.6211, 0.0440)
## Iteration: 30 (-92467.7242, 0.0435)
## Iteration: 40 (-92463.8846, 0.0431)
## Iteration: 50 (-92460.1005, 0.0426)
## Group probs = (0.7875, 0.1832, 0.0292)
##
```

```
## Outer iteration: 23
## Iteration: 1 (-92395.5293, 0.0889)
## Iteration: 10 (-92392.2195, 0.0417)
## Iteration: 20 (-92388.6016, 0.0413)
## Iteration: 30 (-92385.0345, 0.0409)
## Iteration: 40 (-92381.5161, 0.0405)
## Iteration: 50 (-92378.0453, 0.0401)
## Group probs = (0.7869, 0.1839, 0.0292)
##
## Outer iteration: 24
## Iteration: 1 (-92257.9530, 0.1016)
## Iteration: 10 (-92254.8209, 0.0397)
## Iteration: 20 (-92251.4105, 0.0394)
## Iteration: 30 (-92248.0497, 0.0390)
## Iteration: 40 (-92244.7346, 0.0387)
## Iteration: 50 (-92241.4633, 0.0383)
## Group probs = (0.7869, 0.1838, 0.0293)
##
## Outer iteration: 25
## Iteration: 1 (-92237.8298, 0.1496)
## Iteration: 10 (-92234.8660, 0.0385)
## Iteration: 20 (-92231.6492, 0.0381)
## Iteration: 30 (-92228.4768, 0.0377)
## Iteration: 40 (-92225.3454, 0.0373)
## Iteration: 50 (-92222.2533, 0.0369)
## Group probs = (0.7856, 0.1849, 0.0295)
##
## Outer iteration: 26
## Iteration: 1 (-92013.4482, 0.1528)
## Iteration: 10 (-92010.6997, 0.0362)
## Iteration: 20 (-92007.7268, 0.0359)
## Iteration: 30 (-92004.7934, 0.0356)
## Iteration: 40 (-92001.8958, 0.0353)
## Iteration: 50 (-91999.0328, 0.0350)
## Group probs = (0.7846, 0.1857, 0.0297)
##
## Outer iteration: 27
## Iteration: 1 (-91824.6059, 0.0945)
## Iteration: 10 (-91822.0234, 0.0345)
## Iteration: 20 (-91819.2194, 0.0342)
## Iteration: 30 (-91816.4538, 0.0339)
## Iteration: 40 (-91813.7222, 0.0336)
## Iteration: 50 (-91811.0228, 0.0334)
## Group probs = (0.7853, 0.1850, 0.0297)
##
## Outer iteration: 28
## Iteration: 1 (-91915.0641, 0.1807)
## Iteration: 10 (-91912.5612, 0.0338)
## Iteration: 20 (-91909.8734, 0.0335)
## Iteration: 30 (-91907.2225, 0.0332)
## Iteration: 40 (-91904.6031, 0.0329)
## Iteration: 50 (-91902.0136, 0.0326)
## Group probs = (0.7859, 0.1845, 0.0296)
##
```

```
## Outer iteration: 29
## Iteration: 1 (-92009.7410, 0.0742)
## Iteration: 10 (-92007.4056, 0.0325)
## Iteration: 20 (-92004.8589, 0.0322)
## Iteration: 30 (-92002.3442, 0.0320)
## Iteration: 40 (-91999.8585, 0.0317)
## Iteration: 50 (-91997.4002, 0.0314)
## Group probs = (0.7863, 0.1843, 0.0294)
##
## Outer iteration: 30
## Iteration: 1 (-92048.8163, 0.0366)
## Iteration: 10 (-92046.5973, 0.0313)
## Iteration: 20 (-92044.1597, 0.0311)
## Iteration: 30 (-92041.7478, 0.0309)
## Iteration: 40 (-92039.3612, 0.0307)
## Iteration: 50 (-92036.9993, 0.0304)
## Group probs = (0.7865, 0.1840, 0.0295)
##
## Outer iteration: 31
## Iteration: 1 (-92074.9886, 0.0737)
## Iteration: 10 (-92072.8582, 0.0305)
## Iteration: 20 (-92070.5336, 0.0302)
## Iteration: 30 (-92068.2370, 0.0299)
## Iteration: 40 (-92065.9655, 0.0297)
## Iteration: 50 (-92063.7177, 0.0294)
## Group probs = (0.7849, 0.1856, 0.0295)
##
## Outer iteration: 32
## Iteration: 1 (-91802.4433, 0.2920)
## Iteration: 10 (-91800.2187, 0.0290)
## Iteration: 20 (-91797.9579, 0.0288)
## Iteration: 30 (-91795.7494, 0.0285)
## Iteration: 40 (-91793.5742, 0.0283)
## Iteration: 50 (-91791.4257, 0.0281)
## Group probs = (0.7843, 0.1860, 0.0296)
##
## Outer iteration: 33
## Iteration: 1 (-91695.2128, 0.0283)
## Iteration: 10 (-91693.3238, 0.0278)
## Iteration: 20 (-91691.2495, 0.0276)
## Iteration: 30 (-91689.1959, 0.0274)
## Iteration: 40 (-91687.1621, 0.0272)
## Iteration: 50 (-91685.1474, 0.0270)
## Group probs = (0.7848, 0.1856, 0.0295)
##
## Outer iteration: 34
## Iteration: 1 (-91759.2281, 0.1260)
## Iteration: 10 (-91757.3665, 0.0273)
## Iteration: 20 (-91755.3413, 0.0272)
## Iteration: 30 (-91753.3367, 0.0270)
## Iteration: 40 (-91751.3510, 0.0268)
## Iteration: 50 (-91749.3834, 0.0266)
## Group probs = (0.7839, 0.1865, 0.0296)
##
```

```
## Outer iteration: 35
## Iteration: 1 (-91604.1042, 0.1785)
## Iteration: 10 (-91602.3210, 0.0261)
## Iteration: 20 (-91600.4123, 0.0259)
## Iteration: 30 (-91598.5252, 0.0258)
## Iteration: 40 (-91596.6559, 0.0256)
## Iteration: 50 (-91594.8034, 0.0254)
## Group probs = (0.7848, 0.1857, 0.0295)
##
## Outer iteration: 36
## Iteration: 1 (-91744.5583, 0.1282)
## Iteration: 10 (-91742.8505, 0.0257)
## Iteration: 20 (-91741.0098, 0.0254)
## Iteration: 30 (-91739.1902, 0.0252)
## Iteration: 40 (-91737.3880, 0.0251)
## Iteration: 50 (-91735.6019, 0.0249)
## Group probs = (0.7839, 0.1865, 0.0295)
##
## Outer iteration: 37
## Iteration: 1 (-91591.1472, 0.1341)
## Iteration: 10 (-91589.5183, 0.0244)
## Iteration: 20 (-91587.7766, 0.0242)
## Iteration: 30 (-91586.0549, 0.0241)
## Iteration: 40 (-91584.3492, 0.0240)
## Iteration: 50 (-91582.6581, 0.0238)
## Group probs = (0.7837, 0.1868, 0.0295)
##
## Outer iteration: 38
## Iteration: 1 (-91550.9993, 0.0976)
## Iteration: 10 (-91549.4667, 0.0237)
## Iteration: 20 (-91547.7970, 0.0235)
## Iteration: 30 (-91546.1434, 0.0234)
## Iteration: 40 (-91544.5040, 0.0233)
## Iteration: 50 (-91542.8780, 0.0231)
## Group probs = (0.7843, 0.1862, 0.0295)
##
## Outer iteration: 39
## Iteration: 1 (-91629.3673, 0.1582)
## Iteration: 10 (-91627.8559, 0.0234)
## Iteration: 20 (-91626.2317, 0.0232)
## Iteration: 30 (-91624.6244, 0.0230)
## Iteration: 40 (-91623.0311, 0.0229)
## Iteration: 50 (-91621.4506, 0.0227)
## Group probs = (0.7838, 0.1868, 0.0294)
##
## Outer iteration: 40
## Iteration: 1 (-91528.8823, 0.0927)
## Iteration: 10 (-91527.4234, 0.0226)
## Iteration: 20 (-91525.8390, 0.0225)
## Iteration: 30 (-91524.2710, 0.0224)
## Iteration: 40 (-91522.7170, 0.0223)
## Iteration: 50 (-91521.1757, 0.0221)
## Group probs = (0.7844, 0.1862, 0.0294)
##
```

```

## Outer iteration: 1
## Iteration: 1 (-102775.7139, Inf)
## Iteration: 10 (-94513.5949, 2.6834)
## Iteration: 20 (-93608.3909, 1.2797)
## Iteration: 30 (-93221.3880, 0.8620)
## Iteration: 40 (-92989.0908, 0.6606)
## Iteration: 50 (-92827.5988, 0.5409)
## Group probs = (0.7928, 0.1776, 0.0295)
##
## Outer iteration: 2
## Iteration: 1 (-95201.0719, 0.5210)
## Iteration: 10 (-95134.5470, 0.3860)
## Iteration: 20 (-95079.2110, 0.3273)
## Iteration: 30 (-95034.7313, 0.2874)
## Iteration: 40 (-94997.8638, 0.2571)
## Iteration: 50 (-94966.6621, 0.2330)
## Group probs = (0.7961, 0.1752, 0.0287)
##
## Outer iteration: 3
## Iteration: 1 (-95468.3914, 0.2494)
## Iteration: 10 (-95442.1320, 0.2187)
## Iteration: 20 (-95416.6305, 0.2025)
## Iteration: 30 (-95394.1842, 0.1882)
## Iteration: 40 (-95374.2387, 0.1758)
## Iteration: 50 (-95356.3724, 0.1649)
## Group probs = (0.7983, 0.1736, 0.0280)
##
## Outer iteration: 4
## Iteration: 1 (-95699.3302, 0.1681)
## Iteration: 10 (-95683.1084, 0.1604)
## Iteration: 20 (-95666.7769, 0.1525)
## Iteration: 30 (-95651.8868, 0.1450)
## Iteration: 40 (-95638.2338, 0.1380)
## Iteration: 50 (-95625.6548, 0.1316)
## Group probs = (0.7991, 0.1731, 0.0278)
##
## Outer iteration: 5
## Iteration: 1 (-95726.6436, 0.1344)
## Iteration: 10 (-95714.4699, 0.1316)
## Iteration: 20 (-95701.9581, 0.1268)
## Iteration: 30 (-95690.3141, 0.1220)
## Iteration: 40 (-95679.4309, 0.1174)
## Iteration: 50 (-95669.2227, 0.1131)
## Group probs = (0.7992, 0.1727, 0.0280)
##
## Outer iteration: 6
## Iteration: 1 (-95628.7614, 0.2050)
## Iteration: 10 (-95618.1561, 0.1166)
## Iteration: 20 (-95607.1729, 0.1130)
## Iteration: 30 (-95596.8159, 0.1095)
## Iteration: 40 (-95587.0125, 0.1061)
## Iteration: 50 (-95577.7063, 0.1029)
## Group probs = (0.7983, 0.1734, 0.0283)
##

```

```
## Outer iteration: 7
## Iteration: 1 (-95364.4166, 0.1133)
## Iteration: 10 (-95354.7188, 0.1059)
## Iteration: 20 (-95344.5370, 0.1033)
## Iteration: 30 (-95334.8388, 0.1007)
## Iteration: 40 (-95325.5642, 0.0982)
## Iteration: 50 (-95316.6718, 0.0958)
## Group probs = (0.7978, 0.1739, 0.0284)
##
## Outer iteration: 8
## Iteration: 1 (-95198.0942, 0.1024)
## Iteration: 10 (-95188.7755, 0.0988)
## Iteration: 20 (-95178.8967, 0.0968)
## Iteration: 30 (-95169.4035, 0.0948)
## Iteration: 40 (-95160.2502, 0.0928)
## Iteration: 50 (-95151.4065, 0.0909)
## Group probs = (0.7960, 0.1751, 0.0289)
##
## Outer iteration: 9
## Iteration: 1 (-94794.0123, 0.0911)
## Iteration: 10 (-94784.6663, 0.0944)
## Iteration: 20 (-94774.7246, 0.0925)
## Iteration: 30 (-94765.1246, 0.0908)
## Iteration: 40 (-94755.8235, 0.0891)
## Iteration: 50 (-94746.7964, 0.0874)
## Group probs = (0.7945, 0.1763, 0.0293)
##
## Outer iteration: 10
## Iteration: 1 (-94456.6517, 0.1664)
## Iteration: 10 (-94447.4158, 0.0893)
## Iteration: 20 (-94437.5521, 0.0878)
## Iteration: 30 (-94427.9891, 0.0864)
## Iteration: 40 (-94418.6887, 0.0850)
## Iteration: 50 (-94409.6305, 0.0836)
## Group probs = (0.7914, 0.1787, 0.0300)
##
## Outer iteration: 11
## Iteration: 1 (-93838.1372, 0.1798)
## Iteration: 10 (-93828.8752, 0.0854)
## Iteration: 20 (-93819.0641, 0.0839)
## Iteration: 30 (-93809.5623, 0.0826)
## Iteration: 40 (-93800.3158, 0.0814)
## Iteration: 50 (-93791.3009, 0.0802)
## Group probs = (0.7897, 0.1799, 0.0304)
##
## Outer iteration: 12
## Iteration: 1 (-93479.3249, 0.1394)
## Iteration: 10 (-93470.6471, 0.0812)
## Iteration: 20 (-93461.2940, 0.0799)
## Iteration: 30 (-93452.1852, 0.0788)
## Iteration: 40 (-93443.2999, 0.0776)
## Iteration: 50 (-93434.6250, 0.0765)
## Group probs = (0.7892, 0.1803, 0.0305)
##
```

```
## Outer iteration: 13
## Iteration: 1 (-93313.3629, 0.0835)
## Iteration: 10 (-93305.1479, 0.0778)
## Iteration: 20 (-93296.2572, 0.0767)
## Iteration: 30 (-93287.5868, 0.0756)
## Iteration: 40 (-93279.1225, 0.0745)
## Iteration: 50 (-93270.8541, 0.0734)
## Group probs = (0.7888, 0.1806, 0.0306)
##
## Outer iteration: 14
## Iteration: 1 (-93199.2338, 0.0805)
## Iteration: 10 (-93191.7016, 0.0733)
## Iteration: 20 (-93183.5241, 0.0723)
## Iteration: 30 (-93175.5344, 0.0712)
## Iteration: 40 (-93167.7238, 0.0702)
## Iteration: 50 (-93160.0850, 0.0692)
## Group probs = (0.7867, 0.1825, 0.0307)
##
## Outer iteration: 15
## Iteration: 1 (-92808.9193, 0.2586)
## Iteration: 10 (-92802.0040, 0.0675)
## Iteration: 20 (-92794.6462, 0.0665)
## Iteration: 30 (-92787.4692, 0.0656)
## Iteration: 40 (-92780.4498, 0.0648)
## Iteration: 50 (-92773.5775, 0.0640)
## Group probs = (0.7858, 0.1832, 0.0311)
##
## Outer iteration: 16
## Iteration: 1 (-92601.8276, 0.0657)
## Iteration: 10 (-92595.7011, 0.0635)
## Iteration: 20 (-92589.0338, 0.0626)
## Iteration: 30 (-92582.5015, 0.0618)
## Iteration: 40 (-92576.0987, 0.0609)
## Iteration: 50 (-92569.8211, 0.0602)
## Group probs = (0.7867, 0.1823, 0.0310)
##
## Outer iteration: 17
## Iteration: 1 (-92716.7170, 0.1547)
## Iteration: 10 (-92710.9992, 0.0606)
## Iteration: 20 (-92704.8235, 0.0598)
## Iteration: 30 (-92698.7750, 0.0590)
## Iteration: 40 (-92692.8440, 0.0582)
## Iteration: 50 (-92687.0253, 0.0574)
## Group probs = (0.7852, 0.1837, 0.0311)
##
## Outer iteration: 18
## Iteration: 1 (-92438.8557, 0.2178)
## Iteration: 10 (-92433.5876, 0.0562)
## Iteration: 20 (-92427.9478, 0.0555)
## Iteration: 30 (-92422.4246, 0.0548)
## Iteration: 40 (-92417.0053, 0.0542)
## Iteration: 50 (-92411.6841, 0.0536)
## Group probs = (0.7840, 0.1848, 0.0312)
##
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## Outer iteration: 19
## Iteration: 1 (-92197.0416, 0.1204)
## Iteration: 10 (-92192.1877, 0.0532)
## Iteration: 20 (-92186.9420, 0.0526)
## Iteration: 30 (-92181.8015, 0.0520)
## Iteration: 40 (-92176.7554, 0.0515)
## Iteration: 50 (-92171.7980, 0.0509)
## Group probs = (0.7850, 0.1839, 0.0311)
##
## Outer iteration: 20
## Iteration: 1 (-92341.3994, 0.1297)
## Iteration: 10 (-92336.9706, 0.0508)
## Iteration: 20 (-92332.1725, 0.0502)
## Iteration: 30 (-92327.4607, 0.0496)
## Iteration: 40 (-92322.8282, 0.0490)
## Iteration: 50 (-92318.2714, 0.0484)
## Group probs = (0.7852, 0.1836, 0.0312)
##
## Outer iteration: 21
## Iteration: 1 (-92331.1383, 0.1511)
## Iteration: 10 (-92326.9826, 0.0488)
## Iteration: 20 (-92322.4782, 0.0482)
## Iteration: 30 (-92318.0500, 0.0476)
## Iteration: 40 (-92313.6930, 0.0470)
## Iteration: 50 (-92309.4045, 0.0465)
## Group probs = (0.7852, 0.1836, 0.0312)
##
## Outer iteration: 22
## Iteration: 1 (-92308.2904, 0.0699)
## Iteration: 10 (-92304.5239, 0.0457)
## Iteration: 20 (-92300.4065, 0.0452)
## Iteration: 30 (-92296.3513, 0.0447)
## Iteration: 40 (-92292.3566, 0.0443)
## Iteration: 50 (-92288.4207, 0.0438)
## Group probs = (0.7856, 0.1829, 0.0315)
##
## Outer iteration: 23
## Iteration: 1 (-92355.6656, 0.2269)
## Iteration: 10 (-92351.9997, 0.0444)
## Iteration: 20 (-92348.1003, 0.0437)
## Iteration: 30 (-92344.2747, 0.0431)
## Iteration: 40 (-92340.5098, 0.0426)
## Iteration: 50 (-92336.8007, 0.0421)
## Group probs = (0.7855, 0.1831, 0.0314)
##
## Outer iteration: 24
## Iteration: 1 (-92309.4603, 0.1478)
## Iteration: 10 (-92306.1560, 0.0414)
## Iteration: 20 (-92302.5653, 0.0410)
## Iteration: 30 (-92299.0265, 0.0406)
## Iteration: 40 (-92295.5363, 0.0402)
## Iteration: 50 (-92292.0932, 0.0398)
## Group probs = (0.7842, 0.1840, 0.0318)
##

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## Outer iteration: 25
## Iteration: 1 (-92072.9139, 0.0648)
## Iteration: 10 (-92069.7919, 0.0398)
## Iteration: 20 (-92066.3939, 0.0394)
## Iteration: 30 (-92063.0453, 0.0390)
## Iteration: 40 (-92059.7422, 0.0386)
## Iteration: 50 (-92056.4827, 0.0383)
## Group probs = (0.7839, 0.1843, 0.0318)
##
## Outer iteration: 26
## Iteration: 1 (-92003.8194, 0.0836)
## Iteration: 10 (-92000.9014, 0.0380)
## Iteration: 20 (-91997.7148, 0.0377)
## Iteration: 30 (-91994.5699, 0.0373)
## Iteration: 40 (-91991.4649, 0.0370)
## Iteration: 50 (-91988.3988, 0.0367)
## Group probs = (0.7844, 0.1840, 0.0316)
##
## Outer iteration: 27
## Iteration: 1 (-92055.9598, 0.0457)
## Iteration: 10 (-92053.1901, 0.0367)
## Iteration: 20 (-92050.1529, 0.0364)
## Iteration: 30 (-92047.1536, 0.0361)
## Iteration: 40 (-92044.1912, 0.0358)
## Iteration: 50 (-92041.2649, 0.0355)
## Group probs = (0.7837, 0.1846, 0.0318)
##
## Outer iteration: 28
## Iteration: 1 (-91921.2578, 0.0426)
## Iteration: 10 (-91918.6541, 0.0350)
## Iteration: 20 (-91915.8067, 0.0347)
## Iteration: 30 (-91912.9947, 0.0344)
## Iteration: 40 (-91910.2161, 0.0341)
## Iteration: 50 (-91907.4699, 0.0339)
## Group probs = (0.7846, 0.1838, 0.0317)
##
## Outer iteration: 29
## Iteration: 1 (-92060.9834, 0.1074)
## Iteration: 10 (-92058.4829, 0.0340)
## Iteration: 20 (-92055.7704, 0.0337)
## Iteration: 30 (-92053.0958, 0.0334)
## Iteration: 40 (-92050.4539, 0.0331)
## Iteration: 50 (-92047.8427, 0.0328)
## Group probs = (0.7846, 0.1836, 0.0318)
##
## Outer iteration: 30
## Iteration: 1 (-92037.9790, 0.0759)
## Iteration: 10 (-92035.6449, 0.0326)
## Iteration: 20 (-92033.0976, 0.0323)
## Iteration: 30 (-92030.5810, 0.0320)
## Iteration: 40 (-92028.0926, 0.0317)
## Iteration: 50 (-92025.6311, 0.0314)
## Group probs = (0.7838, 0.1844, 0.0318)
##
```

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## Outer iteration: 31
## Iteration: 1 (-91894.5500, 0.1571)
## Iteration: 10 (-91892.3010, 0.0310)
## Iteration: 20 (-91889.8780, 0.0308)
## Iteration: 30 (-91887.4873, 0.0306)
## Iteration: 40 (-91885.1236, 0.0304)
## Iteration: 50 (-91882.7851, 0.0302)
## Group probs = (0.7839, 0.1844, 0.0317)
##
## Outer iteration: 32
## Iteration: 1 (-91914.5551, 0.0520)
## Iteration: 10 (-91912.4536, 0.0299)
## Iteration: 20 (-91910.1525, 0.0298)
## Iteration: 30 (-91907.8767, 0.0296)
## Iteration: 40 (-91905.6244, 0.0294)
## Iteration: 50 (-91903.3947, 0.0292)
## Group probs = (0.7832, 0.1849, 0.0319)
##
## Outer iteration: 33
## Iteration: 1 (-91774.5431, 0.0401)
## Iteration: 10 (-91772.5432, 0.0290)
## Iteration: 20 (-91770.3538, 0.0287)
## Iteration: 30 (-91768.1889, 0.0285)
## Iteration: 40 (-91766.0462, 0.0283)
## Iteration: 50 (-91763.9248, 0.0281)
## Group probs = (0.7840, 0.1842, 0.0318)
##
## Outer iteration: 34
## Iteration: 1 (-91880.0464, 0.1870)
## Iteration: 10 (-91878.0569, 0.0286)
## Iteration: 20 (-91875.9251, 0.0283)
## Iteration: 30 (-91873.8202, 0.0280)
## Iteration: 40 (-91871.7373, 0.0278)
## Iteration: 50 (-91869.6749, 0.0276)
## Group probs = (0.7840, 0.1843, 0.0317)
##
## Outer iteration: 35
## Iteration: 1 (-91886.4731, 0.1778)
## Iteration: 10 (-91884.6002, 0.0271)
## Iteration: 20 (-91882.5852, 0.0269)
## Iteration: 30 (-91880.5932, 0.0268)
## Iteration: 40 (-91878.6206, 0.0266)
## Iteration: 50 (-91876.6661, 0.0265)
## Group probs = (0.7831, 0.1850, 0.0319)
##
## Outer iteration: 36
## Iteration: 1 (-91730.1741, 0.0264)
## Iteration: 10 (-91728.4484, 0.0261)
## Iteration: 20 (-91726.5548, 0.0259)
## Iteration: 30 (-91724.6790, 0.0257)
## Iteration: 40 (-91722.8197, 0.0255)
## Iteration: 50 (-91720.9766, 0.0254)
## Group probs = (0.7831, 0.1848, 0.0320)
##
```

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## Outer iteration: 37
## Iteration: 1 (-91715.0625, 0.0826)
## Iteration: 10 (-91713.3945, 0.0254)
## Iteration: 20 (-91711.5721, 0.0252)
## Iteration: 30 (-91709.7668, 0.0251)
## Iteration: 40 (-91707.9773, 0.0249)
## Iteration: 50 (-91706.2030, 0.0247)
## Group probs = (0.7821, 0.1857, 0.0322)
##
## Outer iteration: 38
## Iteration: 1 (-91524.8031, 0.1419)
## Iteration: 10 (-91523.1514, 0.0247)
## Iteration: 20 (-91521.3735, 0.0246)
## Iteration: 30 (-91519.6152, 0.0245)
## Iteration: 40 (-91517.8734, 0.0243)
## Iteration: 50 (-91516.1469, 0.0242)
## Group probs = (0.7826, 0.1852, 0.0321)
##
## Outer iteration: 39
## Iteration: 1 (-91607.6061, 0.1319)
## Iteration: 10 (-91606.0324, 0.0243)
## Iteration: 20 (-91604.3264, 0.0241)
## Iteration: 30 (-91602.6387, 0.0239)
## Iteration: 40 (-91600.9663, 0.0237)
## Iteration: 50 (-91599.3081, 0.0236)
## Group probs = (0.7827, 0.1852, 0.0321)
##
## Outer iteration: 40
## Iteration: 1 (-91608.8770, 0.0622)
## Iteration: 10 (-91607.4116, 0.0232)
## Iteration: 20 (-91605.7992, 0.0231)
## Iteration: 30 (-91604.1997, 0.0230)
## Iteration: 40 (-91602.6127, 0.0228)
## Iteration: 50 (-91601.0381, 0.0227)
## Group probs = (0.7818, 0.1861, 0.0321)
##
## Outer iteration: 1
## Iteration: 1 (-102749.6003, Inf)
## Iteration: 10 (-94360.2658, 2.7019)
## Iteration: 20 (-93434.7480, 1.2876)
## Iteration: 30 (-93039.8150, 0.8661)
## Iteration: 40 (-92803.1196, 0.6630)
## Iteration: 50 (-92638.6615, 0.5425)
## Group probs = (0.7936, 0.1773, 0.0291)
##
## Outer iteration: 2
## Iteration: 1 (-94904.5242, 0.5274)
## Iteration: 10 (-94835.1485, 0.3899)
## Iteration: 20 (-94777.2127, 0.3305)
## Iteration: 30 (-94730.5963, 0.2901)
## Iteration: 40 (-94691.9240, 0.2595)
## Iteration: 50 (-94659.1643, 0.2352)
## Group probs = (0.7976, 0.1741, 0.0282)
##

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## Outer iteration: 3
## Iteration: 1 (-95290.7099, 0.2804)
## Iteration: 10 (-95263.2965, 0.2206)
## Iteration: 20 (-95236.6956, 0.2039)
## Iteration: 30 (-95213.2634, 0.1895)
## Iteration: 40 (-95192.4241, 0.1769)
## Iteration: 50 (-95173.7417, 0.1660)
## Group probs = (0.8001, 0.1722, 0.0277)
##
## Outer iteration: 4
## Iteration: 1 (-95548.5681, 0.2049)
## Iteration: 10 (-95531.3324, 0.1623)
## Iteration: 20 (-95514.0064, 0.1543)
## Iteration: 30 (-95498.2191, 0.1466)
## Iteration: 40 (-95483.7531, 0.1395)
## Iteration: 50 (-95470.4348, 0.1330)
## Group probs = (0.8003, 0.1719, 0.0278)
##
## Outer iteration: 5
## Iteration: 1 (-95464.4835, 0.1315)
## Iteration: 10 (-95452.0710, 0.1315)
## Iteration: 20 (-95439.3130, 0.1266)
## Iteration: 30 (-95427.4579, 0.1217)
## Iteration: 40 (-95416.3968, 0.1170)
## Iteration: 50 (-95406.0419, 0.1127)
## Group probs = (0.7981, 0.1734, 0.0285)
##
## Outer iteration: 6
## Iteration: 1 (-94985.1843, 0.1656)
## Iteration: 10 (-94975.0370, 0.1128)
## Iteration: 20 (-94964.5988, 0.1093)
## Iteration: 30 (-94954.7918, 0.1060)
## Iteration: 40 (-94945.5290, 0.1027)
## Iteration: 50 (-94936.7536, 0.0996)
## Group probs = (0.7973, 0.1740, 0.0287)
##
## Outer iteration: 7
## Iteration: 1 (-94770.3857, 0.1027)
## Iteration: 10 (-94761.5262, 0.1015)
## Iteration: 20 (-94752.2398, 0.0990)
## Iteration: 30 (-94743.4109, 0.0965)
## Iteration: 40 (-94734.9854, 0.0940)
## Iteration: 50 (-94726.9254, 0.0916)
## Group probs = (0.7956, 0.1751, 0.0293)
##
## Outer iteration: 8
## Iteration: 1 (-94401.5259, 0.1256)
## Iteration: 10 (-94393.4647, 0.0929)
## Iteration: 20 (-94384.9475, 0.0908)
## Iteration: 30 (-94376.7741, 0.0888)
## Iteration: 40 (-94368.9024, 0.0869)
## Iteration: 50 (-94361.3056, 0.0851)
## Group probs = (0.7952, 0.1751, 0.0296)
##
```

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## Outer iteration: 9
## Iteration: 1 (-94248.7270, 0.1202)
## Iteration: 10 (-94240.6230, 0.0889)
## Iteration: 20 (-94231.9933, 0.0873)
## Iteration: 30 (-94223.6547, 0.0856)
## Iteration: 40 (-94215.5779, 0.0840)
## Iteration: 50 (-94207.7422, 0.0824)
## Group probs = (0.7930, 0.1770, 0.0301)
##
## Outer iteration: 10
## Iteration: 1 (-93785.9879, 0.2296)
## Iteration: 10 (-93777.5596, 0.0846)
## Iteration: 20 (-93768.6698, 0.0832)
## Iteration: 30 (-93760.0751, 0.0820)
## Iteration: 40 (-93751.7191, 0.0808)
## Iteration: 50 (-93743.5771, 0.0796)
## Group probs = (0.7913, 0.1782, 0.0305)
##
## Outer iteration: 11
## Iteration: 1 (-93417.4068, 0.1106)
## Iteration: 10 (-93408.8338, 0.0824)
## Iteration: 20 (-93399.6343, 0.0812)
## Iteration: 30 (-93390.6874, 0.0801)
## Iteration: 40 (-93381.9606, 0.0790)
## Iteration: 50 (-93373.4368, 0.0779)
## Group probs = (0.7896, 0.1795, 0.0309)
##
## Outer iteration: 12
## Iteration: 1 (-93079.9520, 0.1986)
## Iteration: 10 (-93071.4616, 0.0790)
## Iteration: 20 (-93062.3313, 0.0778)
## Iteration: 30 (-93053.4239, 0.0768)
## Iteration: 40 (-93044.7161, 0.0758)
## Iteration: 50 (-93036.1957, 0.0748)
## Group probs = (0.7889, 0.1799, 0.0313)
##
## Outer iteration: 13
## Iteration: 1 (-92875.4182, 0.0921)
## Iteration: 10 (-92867.1405, 0.0765)
## Iteration: 20 (-92858.1724, 0.0754)
## Iteration: 30 (-92849.4052, 0.0744)
## Iteration: 40 (-92840.8272, 0.0734)
## Iteration: 50 (-92832.4305, 0.0724)
## Group probs = (0.7876, 0.1808, 0.0316)
##
## Outer iteration: 14
## Iteration: 1 (-92602.2545, 0.0999)
## Iteration: 10 (-92594.3551, 0.0729)
## Iteration: 20 (-92585.7862, 0.0719)
## Iteration: 30 (-92577.4080, 0.0709)
## Iteration: 40 (-92569.2090, 0.0700)
## Iteration: 50 (-92561.1816, 0.0691)
## Group probs = (0.7863, 0.1818, 0.0319)
##
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## Outer iteration: 15
## Iteration: 1 (-92317.2838, 0.0862)
## Iteration: 10 (-92309.9319, 0.0690)
## Iteration: 20 (-92301.9540, 0.0681)
## Iteration: 30 (-92294.1485, 0.0672)
## Iteration: 40 (-92286.5054, 0.0664)
## Iteration: 50 (-92279.0181, 0.0655)
## Group probs = (0.7861, 0.1820, 0.0319)
##
## Outer iteration: 16
## Iteration: 1 (-92210.6587, 0.0668)
## Iteration: 10 (-92203.6247, 0.0661)
## Iteration: 20 (-92196.0130, 0.0654)
## Iteration: 30 (-92188.5700, 0.0647)
## Iteration: 40 (-92181.2837, 0.0640)
## Iteration: 50 (-92174.1466, 0.0632)
## Group probs = (0.7855, 0.1827, 0.0318)
##
## Outer iteration: 17
## Iteration: 1 (-92093.9739, 0.1283)
## Iteration: 10 (-92087.5738, 0.0623)
## Iteration: 20 (-92080.6351, 0.0617)
## Iteration: 30 (-92073.8397, 0.0610)
## Iteration: 40 (-92067.1787, 0.0603)
## Iteration: 50 (-92060.6466, 0.0596)
## Group probs = (0.7847, 0.1833, 0.0320)
##
## Outer iteration: 18
## Iteration: 1 (-91930.5702, 0.1192)
## Iteration: 10 (-91924.8480, 0.0583)
## Iteration: 20 (-91918.6273, 0.0575)
## Iteration: 30 (-91912.5232, 0.0568)
## Iteration: 40 (-91906.5308, 0.0562)
## Iteration: 50 (-91900.6466, 0.0555)
## Group probs = (0.7841, 0.1838, 0.0321)
##
## Outer iteration: 19
## Iteration: 1 (-91774.8894, 0.0559)
## Iteration: 10 (-91769.5605, 0.0554)
## Iteration: 20 (-91763.7536, 0.0548)
## Iteration: 30 (-91758.0543, 0.0542)
## Iteration: 40 (-91752.4573, 0.0536)
## Iteration: 50 (-91746.9589, 0.0530)
## Group probs = (0.7829, 0.1848, 0.0323)
##
## Outer iteration: 20
## Iteration: 1 (-91548.7257, 0.1169)
## Iteration: 10 (-91543.8763, 0.0520)
## Iteration: 20 (-91538.6081, 0.0514)
## Iteration: 30 (-91533.4327, 0.0508)
## Iteration: 40 (-91528.3450, 0.0502)
## Iteration: 50 (-91523.3418, 0.0497)
## Group probs = (0.7836, 0.1841, 0.0323)
##
```

```
## Outer iteration: 21
## Iteration: 1 (-91641.1023, 0.1073)
## Iteration: 10 (-91636.6314, 0.0496)
## Iteration: 20 (-91631.7694, 0.0490)
## Iteration: 30 (-91626.9908, 0.0484)
## Iteration: 40 (-91622.2899, 0.0479)
## Iteration: 50 (-91617.6639, 0.0473)
## Group probs = (0.7839, 0.1837, 0.0324)
##
## Outer iteration: 22
## Iteration: 1 (-91650.5920, 0.0968)
## Iteration: 10 (-91646.4283, 0.0473)
## Iteration: 20 (-91641.8934, 0.0468)
## Iteration: 30 (-91637.4315, 0.0463)
## Iteration: 40 (-91633.0389, 0.0457)
## Iteration: 50 (-91628.7132, 0.0453)
## Group probs = (0.7845, 0.1831, 0.0324)
##
## Outer iteration: 23
## Iteration: 1 (-91724.2135, 0.1414)
## Iteration: 10 (-91720.2929, 0.0455)
## Iteration: 20 (-91716.0377, 0.0450)
## Iteration: 30 (-91711.8515, 0.0444)
## Iteration: 40 (-91707.7290, 0.0440)
## Iteration: 50 (-91703.6673, 0.0435)
## Group probs = (0.7844, 0.1832, 0.0324)
##
## Outer iteration: 24
## Iteration: 1 (-91691.0100, 0.0582)
## Iteration: 10 (-91687.3692, 0.0432)
## Iteration: 20 (-91683.3840, 0.0428)
## Iteration: 30 (-91679.4563, 0.0424)
## Iteration: 40 (-91675.5842, 0.0420)
## Iteration: 50 (-91671.7665, 0.0416)
## Group probs = (0.7839, 0.1836, 0.0325)
##
## Outer iteration: 25
## Iteration: 1 (-91582.4050, 0.0640)
## Iteration: 10 (-91579.0050, 0.0412)
## Iteration: 20 (-91575.2832, 0.0408)
## Iteration: 30 (-91571.6132, 0.0404)
## Iteration: 40 (-91567.9932, 0.0400)
## Iteration: 50 (-91564.4219, 0.0396)
## Group probs = (0.7831, 0.1842, 0.0327)
##
## Outer iteration: 26
## Iteration: 1 (-91404.3696, 0.0397)
## Iteration: 10 (-91401.1550, 0.0396)
## Iteration: 20 (-91397.6382, 0.0392)
## Iteration: 30 (-91394.1697, 0.0388)
## Iteration: 40 (-91390.7473, 0.0385)
## Iteration: 50 (-91387.3697, 0.0381)
## Group probs = (0.7833, 0.1840, 0.0326)
##
```

```
## Outer iteration: 27
## Iteration: 1 (-91438.6770, 0.0574)
## Iteration: 10 (-91435.6675, 0.0378)
## Iteration: 20 (-91432.3744, 0.0375)
## Iteration: 30 (-91429.1236, 0.0372)
## Iteration: 40 (-91425.9136, 0.0369)
## Iteration: 50 (-91422.7434, 0.0366)
## Group probs = (0.7837, 0.1837, 0.0326)
##
## Outer iteration: 28
## Iteration: 1 (-91487.4524, 0.0389)
## Iteration: 10 (-91484.6413, 0.0362)
## Iteration: 20 (-91481.5590, 0.0359)
## Iteration: 30 (-91478.5150, 0.0356)
## Iteration: 40 (-91475.5078, 0.0353)
## Iteration: 50 (-91472.5364, 0.0350)
## Group probs = (0.7829, 0.1844, 0.0328)
##
## Outer iteration: 29
## Iteration: 1 (-91335.5063, 0.0558)
## Iteration: 10 (-91332.8752, 0.0344)
## Iteration: 20 (-91330.0008, 0.0341)
## Iteration: 30 (-91327.1610, 0.0338)
## Iteration: 40 (-91324.3539, 0.0335)
## Iteration: 50 (-91321.5786, 0.0332)
## Group probs = (0.7830, 0.1843, 0.0327)
##
## Outer iteration: 30
## Iteration: 1 (-91335.9170, 0.0332)
## Iteration: 10 (-91333.4192, 0.0332)
## Iteration: 20 (-91330.6747, 0.0329)
## Iteration: 30 (-91327.9609, 0.0327)
## Iteration: 40 (-91325.2770, 0.0324)
## Iteration: 50 (-91322.6225, 0.0322)
## Group probs = (0.7835, 0.1839, 0.0326)
##
## Outer iteration: 31
## Iteration: 1 (-91399.6040, 0.0370)
## Iteration: 10 (-91397.2082, 0.0322)
## Iteration: 20 (-91394.5821, 0.0320)
## Iteration: 30 (-91391.9857, 0.0317)
## Iteration: 40 (-91389.4177, 0.0315)
## Iteration: 50 (-91386.8772, 0.0312)
## Group probs = (0.7828, 0.1844, 0.0327)
##
## Outer iteration: 32
## Iteration: 1 (-91274.4208, 0.0587)
## Iteration: 10 (-91272.1507, 0.0308)
## Iteration: 20 (-91269.6676, 0.0306)
## Iteration: 30 (-91267.2130, 0.0304)
## Iteration: 40 (-91264.7847, 0.0302)
## Iteration: 50 (-91262.3818, 0.0299)
## Group probs = (0.7833, 0.1841, 0.0326)
##
```

```
## Outer iteration: 33
## Iteration: 1 (-91352.8091, 0.0304)
## Iteration: 10 (-91350.6624, 0.0298)
## Iteration: 20 (-91348.3029, 0.0296)
## Iteration: 30 (-91345.9672, 0.0294)
## Iteration: 40 (-91343.6547, 0.0292)
## Iteration: 50 (-91341.3649, 0.0290)
## Group probs = (0.7823, 0.1850, 0.0327)
##
## Outer iteration: 34
## Iteration: 1 (-91177.4049, 0.1390)
## Iteration: 10 (-91175.3442, 0.0285)
## Iteration: 20 (-91173.1140, 0.0283)
## Iteration: 30 (-91170.9103, 0.0281)
## Iteration: 40 (-91168.7294, 0.0279)
## Iteration: 50 (-91166.5697, 0.0277)
## Group probs = (0.7822, 0.1851, 0.0327)
##
## Outer iteration: 35
## Iteration: 1 (-91139.5882, 0.0284)
## Iteration: 10 (-91137.6272, 0.0277)
## Iteration: 20 (-91135.4794, 0.0275)
## Iteration: 30 (-91133.3542, 0.0273)
## Iteration: 40 (-91131.2499, 0.0272)
## Iteration: 50 (-91129.1656, 0.0270)
## Group probs = (0.7812, 0.1857, 0.0331)
##
## Outer iteration: 36
## Iteration: 1 (-90955.7116, 0.0461)
## Iteration: 10 (-90953.8503, 0.0268)
## Iteration: 20 (-90951.8181, 0.0266)
## Iteration: 30 (-90949.8070, 0.0264)
## Iteration: 40 (-90947.8147, 0.0262)
## Iteration: 50 (-90945.8404, 0.0260)
## Group probs = (0.7827, 0.1846, 0.0328)
##
## Outer iteration: 37
## Iteration: 1 (-91195.0153, 0.0961)
## Iteration: 10 (-91193.1808, 0.0262)
## Iteration: 20 (-91191.2086, 0.0261)
## Iteration: 30 (-91189.2635, 0.0259)
## Iteration: 40 (-91187.3388, 0.0257)
## Iteration: 50 (-91185.4326, 0.0255)
## Group probs = (0.7819, 0.1851, 0.0331)
##
## Outer iteration: 38
## Iteration: 1 (-91040.6928, 0.0470)
## Iteration: 10 (-91038.9650, 0.0255)
## Iteration: 20 (-91037.0801, 0.0253)
## Iteration: 30 (-91035.2143, 0.0251)
## Iteration: 40 (-91033.3652, 0.0249)
## Iteration: 50 (-91031.5319, 0.0248)
## Group probs = (0.7826, 0.1845, 0.0329)
##
```

```

## Outer iteration: 39
## Iteration: 1 (-91151.4681, 0.0442)
## Iteration: 10 (-91149.7884, 0.0249)
## Iteration: 20 (-91147.9531, 0.0248)
## Iteration: 30 (-91146.1359, 0.0246)
## Iteration: 40 (-91144.3348, 0.0245)
## Iteration: 50 (-91142.5490, 0.0243)
## Group probs = (0.7824, 0.1847, 0.0329)
##
## Outer iteration: 40
## Iteration: 1 (-91098.1613, 0.0832)
## Iteration: 10 (-91096.5546, 0.0241)
## Iteration: 20 (-91094.7938, 0.0240)
## Iteration: 30 (-91093.0489, 0.0239)
## Iteration: 40 (-91091.3187, 0.0237)
## Iteration: 50 (-91089.6027, 0.0236)
## Group probs = (0.7822, 0.1848, 0.0330)
##
## Outer iteration: 1
## Iteration: 1 (-102615.7670, Inf)
## Iteration: 10 (-94217.0913, 2.7039)
## Iteration: 20 (-93292.6944, 1.2861)
## Iteration: 30 (-92898.0917, 0.8648)
## Iteration: 40 (-92661.3560, 0.6622)
## Iteration: 50 (-92496.7489, 0.5420)
## Group probs = (0.7934, 0.1773, 0.0293)
##
## Outer iteration: 2
## Iteration: 1 (-94857.6007, 0.5335)
## Iteration: 10 (-94788.7707, 0.3890)
## Iteration: 20 (-94731.8141, 0.3293)
## Iteration: 30 (-94686.0881, 0.2889)
## Iteration: 40 (-94648.2037, 0.2583)
## Iteration: 50 (-94616.1441, 0.2340)
## Group probs = (0.7950, 0.1762, 0.0289)
##
## Outer iteration: 3
## Iteration: 1 (-94812.5826, 0.2543)
## Iteration: 10 (-94786.2720, 0.2173)
## Iteration: 20 (-94760.6771, 0.2012)
## Iteration: 30 (-94738.1346, 0.1870)
## Iteration: 40 (-94718.0927, 0.1747)
## Iteration: 50 (-94700.1307, 0.1639)
## Group probs = (0.7971, 0.1744, 0.0286)
##
## Outer iteration: 4
## Iteration: 1 (-95001.8006, 0.2593)
## Iteration: 10 (-94984.8223, 0.1617)
## Iteration: 20 (-94967.7886, 0.1536)
## Iteration: 30 (-94952.2732, 0.1458)
## Iteration: 40 (-94938.0609, 0.1388)
## Iteration: 50 (-94924.9795, 0.1323)
## Group probs = (0.7975, 0.1740, 0.0285)
##

```

```
## Outer iteration: 5
## Iteration: 1 (-94961.5908, 0.1507)
## Iteration: 10 (-94948.9807, 0.1322)
## Iteration: 20 (-94936.0423, 0.1273)
## Iteration: 30 (-94924.0228, 0.1223)
## Iteration: 40 (-94912.8098, 0.1177)
## Iteration: 50 (-94902.3127, 0.1133)
## Group probs = (0.7970, 0.1744, 0.0286)
##
## Outer iteration: 6
## Iteration: 1 (-94790.3749, 0.1613)
## Iteration: 10 (-94780.0676, 0.1135)
## Iteration: 20 (-94769.3929, 0.1102)
## Iteration: 30 (-94759.3431, 0.1069)
## Iteration: 40 (-94749.8388, 0.1036)
## Iteration: 50 (-94740.8239, 0.1005)
## Group probs = (0.7960, 0.1751, 0.0289)
##
## Outer iteration: 7
## Iteration: 1 (-94526.1487, 0.1038)
## Iteration: 10 (-94517.0366, 0.1024)
## Iteration: 20 (-94507.4661, 0.0998)
## Iteration: 30 (-94498.3523, 0.0973)
## Iteration: 40 (-94489.6425, 0.0948)
## Iteration: 50 (-94481.2989, 0.0924)
## Group probs = (0.7951, 0.1758, 0.0292)
##
## Outer iteration: 8
## Iteration: 1 (-94283.2571, 0.1063)
## Iteration: 10 (-94274.5826, 0.0949)
## Iteration: 20 (-94265.4128, 0.0929)
## Iteration: 30 (-94256.6138, 0.0910)
## Iteration: 40 (-94248.1394, 0.0890)
## Iteration: 50 (-94239.9605, 0.0871)
## Group probs = (0.7946, 0.1760, 0.0293)
##
## Outer iteration: 9
## Iteration: 1 (-94132.2262, 0.0893)
## Iteration: 10 (-94123.5956, 0.0902)
## Iteration: 20 (-94114.3985, 0.0887)
## Iteration: 30 (-94105.5179, 0.0871)
## Iteration: 40 (-94096.9181, 0.0855)
## Iteration: 50 (-94088.5763, 0.0839)
## Group probs = (0.7933, 0.1772, 0.0295)
##
## Outer iteration: 10
## Iteration: 1 (-93819.3656, 0.1465)
## Iteration: 10 (-93810.5927, 0.0864)
## Iteration: 20 (-93801.2464, 0.0851)
## Iteration: 30 (-93792.1992, 0.0837)
## Iteration: 40 (-93783.4089, 0.0824)
## Iteration: 50 (-93774.8537, 0.0811)
## Group probs = (0.7899, 0.1799, 0.0302)
##
```

```
## Outer iteration: 11
## Iteration: 1 (-93173.8556, 0.2439)
## Iteration: 10 (-93164.9891, 0.0828)
## Iteration: 20 (-93155.6541, 0.0812)
## Iteration: 30 (-93146.6192, 0.0799)
## Iteration: 40 (-93137.8268, 0.0788)
## Iteration: 50 (-93129.2526, 0.0777)
## Group probs = (0.7878, 0.1815, 0.0308)
##
## Outer iteration: 12
## Iteration: 1 (-92732.7725, 0.0815)
## Iteration: 10 (-92724.3289, 0.0793)
## Iteration: 20 (-92715.2790, 0.0779)
## Iteration: 30 (-92706.4767, 0.0767)
## Iteration: 40 (-92697.8904, 0.0757)
## Iteration: 50 (-92689.5046, 0.0746)
## Group probs = (0.7874, 0.1816, 0.0310)
##
## Outer iteration: 13
## Iteration: 1 (-92598.6741, 0.0756)
## Iteration: 10 (-92590.6827, 0.0760)
## Iteration: 20 (-92582.0230, 0.0749)
## Iteration: 30 (-92573.5692, 0.0739)
## Iteration: 40 (-92565.3102, 0.0728)
## Iteration: 50 (-92557.2376, 0.0718)
## Group probs = (0.7865, 0.1825, 0.0311)
##
## Outer iteration: 14
## Iteration: 1 (-92388.9730, 0.0980)
## Iteration: 10 (-92381.4521, 0.0718)
## Iteration: 20 (-92373.3161, 0.0709)
## Iteration: 30 (-92365.3740, 0.0699)
## Iteration: 40 (-92357.6108, 0.0690)
## Iteration: 50 (-92350.0172, 0.0681)
## Group probs = (0.7880, 0.1812, 0.0308)
##
## Outer iteration: 15
## Iteration: 1 (-92598.3182, 0.1532)
## Iteration: 10 (-92591.2175, 0.0692)
## Iteration: 20 (-92583.5813, 0.0683)
## Iteration: 30 (-92576.1233, 0.0673)
## Iteration: 40 (-92568.8280, 0.0664)
## Iteration: 50 (-92561.6874, 0.0654)
## Group probs = (0.7866, 0.1822, 0.0313)
##
## Outer iteration: 16
## Iteration: 1 (-92297.6090, 0.0738)
## Iteration: 10 (-92291.1739, 0.0652)
## Iteration: 20 (-92284.1890, 0.0642)
## Iteration: 30 (-92277.3515, 0.0633)
## Iteration: 40 (-92270.6542, 0.0625)
## Iteration: 50 (-92264.0917, 0.0616)
## Group probs = (0.7860, 0.1828, 0.0312)
##
```

```
## Outer iteration: 17
## Iteration: 1 (-92158.1478, 0.1497)
## Iteration: 10 (-92152.1933, 0.0610)
## Iteration: 20 (-92145.7587, 0.0602)
## Iteration: 30 (-92139.4601, 0.0595)
## Iteration: 40 (-92133.2873, 0.0588)
## Iteration: 50 (-92127.2343, 0.0581)
## Group probs = (0.7852, 0.1834, 0.0313)
##
## Outer iteration: 18
## Iteration: 1 (-91990.8099, 0.0682)
## Iteration: 10 (-91985.4360, 0.0575)
## Iteration: 20 (-91979.5841, 0.0567)
## Iteration: 30 (-91973.8440, 0.0560)
## Iteration: 40 (-91968.2103, 0.0553)
## Iteration: 50 (-91962.6791, 0.0546)
## Group probs = (0.7842, 0.1841, 0.0317)
##
## Outer iteration: 19
## Iteration: 1 (-91796.6730, 0.0631)
## Iteration: 10 (-91791.8325, 0.0537)
## Iteration: 20 (-91786.5520, 0.0530)
## Iteration: 30 (-91781.3639, 0.0524)
## Iteration: 40 (-91776.2651, 0.0517)
## Iteration: 50 (-91771.2529, 0.0511)
## Group probs = (0.7842, 0.1843, 0.0315)
##
## Outer iteration: 20
## Iteration: 1 (-91759.7261, 0.0916)
## Iteration: 10 (-91755.2225, 0.0507)
## Iteration: 20 (-91750.3148, 0.0502)
## Iteration: 30 (-91745.4913, 0.0496)
## Iteration: 40 (-91740.7479, 0.0491)
## Iteration: 50 (-91736.0820, 0.0485)
## Group probs = (0.7843, 0.1843, 0.0314)
##
## Outer iteration: 21
## Iteration: 1 (-91755.4332, 0.0554)
## Iteration: 10 (-91751.2781, 0.0481)
## Iteration: 20 (-91746.7370, 0.0476)
## Iteration: 30 (-91742.2688, 0.0471)
## Iteration: 40 (-91737.8708, 0.0466)
## Iteration: 50 (-91733.5412, 0.0462)
## Group probs = (0.7838, 0.1847, 0.0314)
##
## Outer iteration: 22
## Iteration: 1 (-91643.3327, 0.0461)
## Iteration: 10 (-91639.4337, 0.0460)
## Iteration: 20 (-91635.1739, 0.0455)
## Iteration: 30 (-91630.9821, 0.0450)
## Iteration: 40 (-91626.8548, 0.0446)
## Iteration: 50 (-91622.7897, 0.0441)
## Group probs = (0.7837, 0.1849, 0.0314)
##
```

```
## Outer iteration: 23
## Iteration: 1 (-91592.2618, 0.0448)
## Iteration: 10 (-91588.6411, 0.0438)
## Iteration: 20 (-91584.6752, 0.0434)
## Iteration: 30 (-91580.7673, 0.0430)
## Iteration: 40 (-91576.9157, 0.0426)
## Iteration: 50 (-91573.1189, 0.0421)
## Group probs = (0.7843, 0.1843, 0.0314)
##
## Outer iteration: 24
## Iteration: 1 (-91666.4595, 0.1583)
## Iteration: 10 (-91663.0008, 0.0424)
## Iteration: 20 (-91659.2617, 0.0419)
## Iteration: 30 (-91655.5809, 0.0415)
## Iteration: 40 (-91651.9529, 0.0411)
## Iteration: 50 (-91648.3754, 0.0406)
## Group probs = (0.7836, 0.1851, 0.0314)
##
## Outer iteration: 25
## Iteration: 1 (-91533.3340, 0.2097)
## Iteration: 10 (-91530.0742, 0.0399)
## Iteration: 20 (-91526.5913, 0.0395)
## Iteration: 30 (-91523.1640, 0.0391)
## Iteration: 40 (-91519.7849, 0.0387)
## Iteration: 50 (-91516.4510, 0.0384)
## Group probs = (0.7822, 0.1862, 0.0316)
##
## Outer iteration: 26
## Iteration: 1 (-91282.2783, 0.1285)
## Iteration: 10 (-91279.2591, 0.0379)
## Iteration: 20 (-91276.0003, 0.0375)
## Iteration: 30 (-91272.7958, 0.0372)
## Iteration: 40 (-91269.6369, 0.0368)
## Iteration: 50 (-91266.5199, 0.0365)
## Group probs = (0.7816, 0.1866, 0.0318)
##
## Outer iteration: 27
## Iteration: 1 (-91176.6276, 0.0510)
## Iteration: 10 (-91173.8732, 0.0362)
## Iteration: 20 (-91170.8601, 0.0358)
## Iteration: 30 (-91167.8849, 0.0355)
## Iteration: 40 (-91164.9455, 0.0352)
## Iteration: 50 (-91162.0409, 0.0349)
## Group probs = (0.7818, 0.1864, 0.0318)
##
## Outer iteration: 28
## Iteration: 1 (-91182.2666, 0.0676)
## Iteration: 10 (-91179.6671, 0.0349)
## Iteration: 20 (-91176.8206, 0.0346)
## Iteration: 30 (-91174.0087, 0.0342)
## Iteration: 40 (-91171.2297, 0.0340)
## Iteration: 50 (-91168.4825, 0.0337)
## Group probs = (0.7798, 0.1880, 0.0322)
##
```

```
## Outer iteration: 29
## Iteration: 1 (-90843.1010, 0.1696)
## Iteration: 10 (-90840.6060, 0.0331)
## Iteration: 20 (-90837.9366, 0.0328)
## Iteration: 30 (-90835.3072, 0.0325)
## Iteration: 40 (-90832.7099, 0.0322)
## Iteration: 50 (-90830.1422, 0.0320)
## Group probs = (0.7801, 0.1877, 0.0322)
##
## Outer iteration: 30
## Iteration: 1 (-90870.7571, 0.0806)
## Iteration: 10 (-90868.4498, 0.0320)
## Iteration: 20 (-90865.9263, 0.0317)
## Iteration: 30 (-90863.4319, 0.0315)
## Iteration: 40 (-90860.9647, 0.0312)
## Iteration: 50 (-90858.5238, 0.0310)
## Group probs = (0.7801, 0.1879, 0.0320)
##
## Outer iteration: 31
## Iteration: 1 (-90851.0837, 0.1110)
## Iteration: 10 (-90848.8591, 0.0308)
## Iteration: 20 (-90846.4402, 0.0306)
## Iteration: 30 (-90844.0502, 0.0304)
## Iteration: 40 (-90841.6862, 0.0302)
## Iteration: 50 (-90839.3469, 0.0300)
## Group probs = (0.7805, 0.1875, 0.0320)
##
## Outer iteration: 32
## Iteration: 1 (-90909.8975, 0.1300)
## Iteration: 10 (-90907.7645, 0.0301)
## Iteration: 20 (-90905.4517, 0.0298)
## Iteration: 30 (-90903.1665, 0.0296)
## Iteration: 40 (-90900.9054, 0.0294)
## Iteration: 50 (-90898.6673, 0.0291)
## Group probs = (0.7812, 0.1871, 0.0317)
##
## Outer iteration: 33
## Iteration: 1 (-91005.0233, 0.0460)
## Iteration: 10 (-91003.0051, 0.0290)
## Iteration: 20 (-91000.7908, 0.0288)
## Iteration: 30 (-90998.5986, 0.0286)
## Iteration: 40 (-90996.4277, 0.0285)
## Iteration: 50 (-90994.2776, 0.0283)
## Group probs = (0.7802, 0.1880, 0.0318)
##
## Outer iteration: 34
## Iteration: 1 (-90832.7557, 0.1749)
## Iteration: 10 (-90830.7602, 0.0281)
## Iteration: 20 (-90828.6274, 0.0279)
## Iteration: 30 (-90826.5245, 0.0277)
## Iteration: 40 (-90824.4452, 0.0275)
## Iteration: 50 (-90822.3870, 0.0273)
## Group probs = (0.7803, 0.1879, 0.0318)
##
```

```
## Outer iteration: 35
## Iteration: 1 (-90842.7751, 0.0353)
## Iteration: 10 (-90840.9678, 0.0269)
## Iteration: 20 (-90838.9795, 0.0267)
## Iteration: 30 (-90837.0095, 0.0266)
## Iteration: 40 (-90835.0573, 0.0264)
## Iteration: 50 (-90833.1225, 0.0262)
## Group probs = (0.7797, 0.1884, 0.0320)
##
## Outer iteration: 36
## Iteration: 1 (-90723.7168, 0.0270)
## Iteration: 10 (-90721.9801, 0.0262)
## Iteration: 20 (-90720.0735, 0.0260)
## Iteration: 30 (-90718.1846, 0.0258)
## Iteration: 40 (-90716.3124, 0.0256)
## Iteration: 50 (-90714.4564, 0.0255)
## Group probs = (0.7798, 0.1882, 0.0319)
##
## Outer iteration: 37
## Iteration: 1 (-90732.6447, 0.0314)
## Iteration: 10 (-90730.9633, 0.0255)
## Iteration: 20 (-90729.1127, 0.0254)
## Iteration: 30 (-90727.2782, 0.0252)
## Iteration: 40 (-90725.4595, 0.0251)
## Iteration: 50 (-90723.6563, 0.0249)
## Group probs = (0.7794, 0.1886, 0.0320)
##
## Outer iteration: 38
## Iteration: 1 (-90656.7492, 0.0274)
## Iteration: 10 (-90655.1497, 0.0246)
## Iteration: 20 (-90653.3929, 0.0245)
## Iteration: 30 (-90651.6516, 0.0243)
## Iteration: 40 (-90649.9251, 0.0242)
## Iteration: 50 (-90648.2128, 0.0241)
## Group probs = (0.7799, 0.1882, 0.0319)
##
## Outer iteration: 39
## Iteration: 1 (-90738.3269, 0.0492)
## Iteration: 10 (-90736.7815, 0.0240)
## Iteration: 20 (-90735.0897, 0.0238)
## Iteration: 30 (-90733.4127, 0.0237)
## Iteration: 40 (-90731.7494, 0.0236)
## Iteration: 50 (-90730.0993, 0.0234)
## Group probs = (0.7810, 0.1873, 0.0316)
##
## Outer iteration: 40
## Iteration: 1 (-90924.9845, 0.0599)
## Iteration: 10 (-90923.4899, 0.0233)
## Iteration: 20 (-90921.8626, 0.0232)
## Iteration: 30 (-90920.2529, 0.0230)
## Iteration: 40 (-90918.6577, 0.0229)
## Iteration: 50 (-90917.0757, 0.0227)
## Group probs = (0.7806, 0.1876, 0.0319)
##
```

```
## Outer iteration: 1
## Iteration: 1 (-103112.6113, Inf)
## Iteration: 10 (-94706.5327, 2.6954)
## Iteration: 20 (-93774.4796, 1.2876)
## Iteration: 30 (-93373.9074, 0.8682)
## Iteration: 40 (-93132.8763, 0.6658)
## Iteration: 50 (-92965.0891, 0.5453)
## Group probs = (0.7978, 0.1730, 0.0292)
##
## Outer iteration: 2
## Iteration: 1 (-95403.1370, 0.5539)
## Iteration: 10 (-95332.0145, 0.3931)
## Iteration: 20 (-95272.7776, 0.3332)
## Iteration: 30 (-95225.1463, 0.2925)
## Iteration: 40 (-95185.6483, 0.2616)
## Iteration: 50 (-95152.2007, 0.2371)
## Group probs = (0.8023, 0.1693, 0.0284)
##
## Outer iteration: 3
## Iteration: 1 (-95857.5324, 0.3463)
## Iteration: 10 (-95828.8139, 0.2241)
## Iteration: 20 (-95801.0967, 0.2070)
## Iteration: 30 (-95776.6918, 0.1923)
## Iteration: 40 (-95754.9927, 0.1795)
## Iteration: 50 (-95735.5441, 0.1684)
## Group probs = (0.8036, 0.1683, 0.0281)
##
## Outer iteration: 4
## Iteration: 1 (-95907.0434, 0.2257)
## Iteration: 10 (-95888.9281, 0.1657)
## Iteration: 20 (-95870.6927, 0.1573)
## Iteration: 30 (-95854.0823, 0.1493)
## Iteration: 40 (-95838.8686, 0.1420)
## Iteration: 50 (-95824.8677, 0.1354)
## Group probs = (0.8054, 0.1667, 0.0279)
##
## Outer iteration: 5
## Iteration: 1 (-96093.4274, 0.2605)
## Iteration: 10 (-96079.8749, 0.1363)
## Iteration: 20 (-96066.0568, 0.1307)
## Iteration: 30 (-96053.2303, 0.1254)
## Iteration: 40 (-96041.2744, 0.1205)
## Iteration: 50 (-96030.0924, 0.1159)
## Group probs = (0.8033, 0.1684, 0.0284)
##
## Outer iteration: 6
## Iteration: 1 (-95621.4606, 0.2408)
## Iteration: 10 (-95610.5117, 0.1153)
## Iteration: 20 (-95599.3204, 0.1118)
## Iteration: 30 (-95588.8202, 0.1084)
## Iteration: 40 (-95578.9089, 0.1051)
## Iteration: 50 (-95569.5237, 0.1019)
## Group probs = (0.8012, 0.1699, 0.0288)
##
```

```
## Outer iteration: 7
## Iteration: 1 (-95168.8639, 0.1537)
## Iteration: 10 (-95159.2245, 0.1034)
## Iteration: 20 (-95149.2403, 0.1008)
## Iteration: 30 (-95139.7775, 0.0983)
## Iteration: 40 (-95130.7577, 0.0958)
## Iteration: 50 (-95122.1357, 0.0934)
## Group probs = (0.8007, 0.1703, 0.0290)
##
## Outer iteration: 8
## Iteration: 1 (-94997.7300, 0.0971)
## Iteration: 10 (-94988.8444, 0.0959)
## Iteration: 20 (-94979.4460, 0.0939)
## Iteration: 30 (-94970.4403, 0.0918)
## Iteration: 40 (-94961.7833, 0.0898)
## Iteration: 50 (-94953.4446, 0.0879)
## Group probs = (0.8011, 0.1698, 0.0291)
##
## Outer iteration: 9
## Iteration: 1 (-94977.3713, 0.1566)
## Iteration: 10 (-94968.6578, 0.0914)
## Iteration: 20 (-94959.4157, 0.0896)
## Iteration: 30 (-94950.4996, 0.0878)
## Iteration: 40 (-94941.8796, 0.0860)
## Iteration: 50 (-94933.5337, 0.0843)
## Group probs = (0.7994, 0.1709, 0.0297)
##
## Outer iteration: 10
## Iteration: 1 (-94608.7786, 0.1069)
## Iteration: 10 (-94600.0385, 0.0870)
## Iteration: 20 (-94590.7003, 0.0854)
## Iteration: 30 (-94581.6653, 0.0839)
## Iteration: 40 (-94572.8992, 0.0825)
## Iteration: 50 (-94564.3812, 0.0811)
## Group probs = (0.7968, 0.1727, 0.0304)
##
## Outer iteration: 11
## Iteration: 1 (-94085.0837, 0.1322)
## Iteration: 10 (-94076.3364, 0.0832)
## Iteration: 20 (-94067.0023, 0.0817)
## Iteration: 30 (-94057.9528, 0.0804)
## Iteration: 40 (-94049.1506, 0.0791)
## Iteration: 50 (-94040.5763, 0.0779)
## Group probs = (0.7952, 0.1741, 0.0308)
##
## Outer iteration: 12
## Iteration: 1 (-93732.7088, 0.1386)
## Iteration: 10 (-93724.0687, 0.0796)
## Iteration: 20 (-93714.8006, 0.0784)
## Iteration: 30 (-93705.7956, 0.0773)
## Iteration: 40 (-93697.0226, 0.0762)
## Iteration: 50 (-93688.4649, 0.0751)
## Group probs = (0.7933, 0.1756, 0.0311)
##
```

```
## Outer iteration: 13
## Iteration: 1 (-93342.7622, 0.1884)
## Iteration: 10 (-93334.5631, 0.0751)
## Iteration: 20 (-93325.7661, 0.0740)
## Iteration: 30 (-93317.2014, 0.0730)
## Iteration: 40 (-93308.8424, 0.0720)
## Iteration: 50 (-93300.6754, 0.0711)
## Group probs = (0.7927, 0.1761, 0.0312)
##
## Outer iteration: 14
## Iteration: 1 (-93193.3588, 0.0711)
## Iteration: 10 (-93185.7457, 0.0716)
## Iteration: 20 (-93177.4794, 0.0707)
## Iteration: 30 (-93169.4011, 0.0697)
## Iteration: 40 (-93161.5021, 0.0688)
## Iteration: 50 (-93153.7751, 0.0678)
## Group probs = (0.7924, 0.1764, 0.0313)
##
## Outer iteration: 15
## Iteration: 1 (-93074.1098, 0.0680)
## Iteration: 10 (-93066.9748, 0.0682)
## Iteration: 20 (-93059.2192, 0.0673)
## Iteration: 30 (-93051.6336, 0.0664)
## Iteration: 40 (-93044.2106, 0.0655)
## Iteration: 50 (-93036.9438, 0.0646)
## Group probs = (0.7905, 0.1779, 0.0316)
##
## Outer iteration: 16
## Iteration: 1 (-92709.4208, 0.1511)
## Iteration: 10 (-92702.8240, 0.0639)
## Iteration: 20 (-92695.7080, 0.0630)
## Iteration: 30 (-92688.7517, 0.0622)
## Iteration: 40 (-92681.9413, 0.0614)
## Iteration: 50 (-92675.2691, 0.0607)
## Group probs = (0.7894, 0.1788, 0.0319)
##
## Outer iteration: 17
## Iteration: 1 (-92468.2681, 0.0718)
## Iteration: 10 (-92462.2168, 0.0609)
## Iteration: 20 (-92455.6388, 0.0600)
## Iteration: 30 (-92449.1946, 0.0592)
## Iteration: 40 (-92442.8775, 0.0585)
## Iteration: 50 (-92436.6827, 0.0578)
## Group probs = (0.7906, 0.1778, 0.0316)
##
## Outer iteration: 18
## Iteration: 1 (-92640.2563, 0.0911)
## Iteration: 10 (-92634.6767, 0.0578)
## Iteration: 20 (-92628.6167, 0.0571)
## Iteration: 30 (-92622.6750, 0.0563)
## Iteration: 40 (-92616.8448, 0.0556)
## Iteration: 50 (-92611.1217, 0.0549)
## Group probs = (0.7908, 0.1776, 0.0316)
##
```

```
## Outer iteration: 19
## Iteration: 1 (-92634.2966, 0.1572)
## Iteration: 10 (-92629.0824, 0.0554)
## Iteration: 20 (-92623.4383, 0.0546)
## Iteration: 30 (-92617.9012, 0.0538)
## Iteration: 40 (-92612.4642, 0.0531)
## Iteration: 50 (-92607.1234, 0.0525)
## Group probs = (0.7897, 0.1785, 0.0318)
##
## Outer iteration: 20
## Iteration: 1 (-92416.2090, 0.1563)
## Iteration: 10 (-92411.4896, 0.0513)
## Iteration: 20 (-92406.3756, 0.0506)
## Iteration: 30 (-92401.3529, 0.0501)
## Iteration: 40 (-92396.4156, 0.0495)
## Iteration: 50 (-92391.5605, 0.0490)
## Group probs = (0.7897, 0.1786, 0.0317)
##
## Outer iteration: 21
## Iteration: 1 (-92399.7426, 0.0510)
## Iteration: 10 (-92395.3932, 0.0486)
## Iteration: 20 (-92390.6386, 0.0481)
## Iteration: 30 (-92385.9613, 0.0476)
## Iteration: 40 (-92381.3587, 0.0471)
## Iteration: 50 (-92376.8288, 0.0466)
## Group probs = (0.7898, 0.1786, 0.0316)
##
## Outer iteration: 22
## Iteration: 1 (-92373.4537, 0.0546)
## Iteration: 10 (-92369.3510, 0.0466)
## Iteration: 20 (-92364.8666, 0.0462)
## Iteration: 30 (-92360.4528, 0.0457)
## Iteration: 40 (-92356.1075, 0.0452)
## Iteration: 50 (-92351.8287, 0.0448)
## Group probs = (0.7891, 0.1792, 0.0317)
##
## Outer iteration: 23
## Iteration: 1 (-92236.8342, 0.1175)
## Iteration: 10 (-92233.0487, 0.0440)
## Iteration: 20 (-92228.9269, 0.0436)
## Iteration: 30 (-92224.8678, 0.0432)
## Iteration: 40 (-92220.8683, 0.0427)
## Iteration: 50 (-92216.9267, 0.0423)
## Group probs = (0.7894, 0.1790, 0.0316)
##
## Outer iteration: 24
## Iteration: 1 (-92262.4443, 0.1096)
## Iteration: 10 (-92258.8965, 0.0424)
## Iteration: 20 (-92255.0321, 0.0419)
## Iteration: 30 (-92251.2249, 0.0414)
## Iteration: 40 (-92247.4715, 0.0410)
## Iteration: 50 (-92243.7701, 0.0406)
## Group probs = (0.7882, 0.1800, 0.0319)
##
```

```
## Outer iteration: 25
## Iteration: 1 (-92039.6055, 0.1421)
## Iteration: 10 (-92036.3179, 0.0397)
## Iteration: 20 (-92032.7459, 0.0393)
## Iteration: 30 (-92029.2258, 0.0390)
## Iteration: 40 (-92025.7534, 0.0387)
## Iteration: 50 (-92022.3270, 0.0383)
## Group probs = (0.7872, 0.1808, 0.0320)
##
## Outer iteration: 26
## Iteration: 1 (-91850.6132, 0.0726)
## Iteration: 10 (-91847.5246, 0.0381)
## Iteration: 20 (-91844.1564, 0.0377)
## Iteration: 30 (-91840.8363, 0.0374)
## Iteration: 40 (-91837.5607, 0.0371)
## Iteration: 50 (-91834.3276, 0.0368)
## Group probs = (0.7876, 0.1805, 0.0318)
##
## Outer iteration: 27
## Iteration: 1 (-91911.7667, 0.0473)
## Iteration: 10 (-91908.8926, 0.0364)
## Iteration: 20 (-91905.7423, 0.0361)
## Iteration: 30 (-91902.6315, 0.0358)
## Iteration: 40 (-91899.5588, 0.0355)
## Iteration: 50 (-91896.5232, 0.0352)
## Group probs = (0.7884, 0.1799, 0.0318)
##
## Outer iteration: 28
## Iteration: 1 (-92024.7481, 0.1438)
## Iteration: 10 (-92021.9996, 0.0353)
## Iteration: 20 (-92019.0241, 0.0350)
## Iteration: 30 (-92016.0903, 0.0346)
## Iteration: 40 (-92013.1931, 0.0343)
## Iteration: 50 (-92010.3305, 0.0340)
## Group probs = (0.7878, 0.1804, 0.0318)
##
## Outer iteration: 29
## Iteration: 1 (-91905.1697, 0.0855)
## Iteration: 10 (-91902.5812, 0.0337)
## Iteration: 20 (-91899.7501, 0.0335)
## Iteration: 30 (-91896.9533, 0.0332)
## Iteration: 40 (-91894.1888, 0.0329)
## Iteration: 50 (-91891.4556, 0.0327)
## Group probs = (0.7872, 0.1809, 0.0319)
##
## Outer iteration: 30
## Iteration: 1 (-91784.8821, 0.0433)
## Iteration: 10 (-91782.4544, 0.0323)
## Iteration: 20 (-91779.7912, 0.0320)
## Iteration: 30 (-91777.1585, 0.0318)
## Iteration: 40 (-91774.5549, 0.0316)
## Iteration: 50 (-91771.9795, 0.0313)
## Group probs = (0.7878, 0.1804, 0.0318)
##
```

```
## Outer iteration: 31
## Iteration: 1 (-91875.3084, 0.0312)
## Iteration: 10 (-91873.0021, 0.0312)
## Iteration: 20 (-91870.4790, 0.0310)
## Iteration: 30 (-91867.9842, 0.0307)
## Iteration: 40 (-91865.5162, 0.0305)
## Iteration: 50 (-91863.0740, 0.0302)
## Group probs = (0.7878, 0.1804, 0.0318)
##
## Outer iteration: 32
## Iteration: 1 (-91852.7641, 0.0685)
## Iteration: 10 (-91850.5611, 0.0303)
## Iteration: 20 (-91848.1472, 0.0300)
## Iteration: 30 (-91845.7586, 0.0298)
## Iteration: 40 (-91843.3944, 0.0296)
## Iteration: 50 (-91841.0539, 0.0294)
## Group probs = (0.7887, 0.1796, 0.0317)
##
## Outer iteration: 33
## Iteration: 1 (-92005.3286, 0.1023)
## Iteration: 10 (-92003.2119, 0.0293)
## Iteration: 20 (-92000.9134, 0.0291)
## Iteration: 30 (-91998.6440, 0.0288)
## Iteration: 40 (-91996.3995, 0.0286)
## Iteration: 50 (-91994.1781, 0.0284)
## Group probs = (0.7883, 0.1799, 0.0319)
##
## Outer iteration: 34
## Iteration: 1 (-91922.6399, 0.0477)
## Iteration: 10 (-91920.6579, 0.0281)
## Iteration: 20 (-91918.4843, 0.0279)
## Iteration: 30 (-91916.3336, 0.0277)
## Iteration: 40 (-91914.2044, 0.0275)
## Iteration: 50 (-91912.0959, 0.0273)
## Group probs = (0.7879, 0.1802, 0.0320)
##
## Outer iteration: 35
## Iteration: 1 (-91833.1620, 0.0489)
## Iteration: 10 (-91831.2493, 0.0275)
## Iteration: 20 (-91829.1477, 0.0273)
## Iteration: 30 (-91827.0662, 0.0271)
## Iteration: 40 (-91825.0040, 0.0269)
## Iteration: 50 (-91822.9606, 0.0267)
## Group probs = (0.7874, 0.1806, 0.0320)
##
## Outer iteration: 36
## Iteration: 1 (-91746.0919, 0.0740)
## Iteration: 10 (-91744.2740, 0.0263)
## Iteration: 20 (-91742.2896, 0.0261)
## Iteration: 30 (-91740.3241, 0.0259)
## Iteration: 40 (-91738.3761, 0.0257)
## Iteration: 50 (-91736.4450, 0.0256)
## Group probs = (0.7873, 0.1806, 0.0321)
##
```

```

## Outer iteration: 37
## Iteration: 1 (-91714.6877, 0.0635)
## Iteration: 10 (-91712.9380, 0.0257)
## Iteration: 20 (-91711.0252, 0.0255)
## Iteration: 30 (-91709.1302, 0.0253)
## Iteration: 40 (-91707.2519, 0.0251)
## Iteration: 50 (-91705.3896, 0.0250)
## Group probs = (0.7863, 0.1815, 0.0322)
##
## Outer iteration: 38
## Iteration: 1 (-91538.5381, 0.1106)
## Iteration: 10 (-91536.8486, 0.0247)
## Iteration: 20 (-91535.0114, 0.0245)
## Iteration: 30 (-91533.1938, 0.0244)
## Iteration: 40 (-91531.3929, 0.0243)
## Iteration: 50 (-91529.6078, 0.0241)
## Group probs = (0.7865, 0.1815, 0.0321)
##
## Outer iteration: 39
## Iteration: 1 (-91557.7951, 0.0249)
## Iteration: 10 (-91556.1816, 0.0240)
## Iteration: 20 (-91554.4147, 0.0239)
## Iteration: 30 (-91552.6637, 0.0238)
## Iteration: 40 (-91550.9276, 0.0236)
## Iteration: 50 (-91549.2059, 0.0235)
## Group probs = (0.7862, 0.1816, 0.0322)
##
## Outer iteration: 40
## Iteration: 1 (-91496.0586, 0.1084)
## Iteration: 10 (-91494.4798, 0.0237)
## Iteration: 20 (-91492.7631, 0.0235)
## Iteration: 30 (-91491.0633, 0.0233)
## Iteration: 40 (-91489.3778, 0.0231)
## Iteration: 50 (-91487.7060, 0.0230)
## Group probs = (0.7856, 0.1823, 0.0321)
##
## CCES_2014
## Outer iteration: 1
## Iteration: 1 (-486902.9817, Inf)
## Iteration: 10 (-454234.6184, 4.5899)
## Iteration: 20 (-451241.1286, 2.1558)
## Iteration: 30 (-450007.6775, 1.4356)
## Iteration: 40 (-449280.5102, 1.0884)
## Iteration: 50 (-448780.7032, 0.8828)
## Group probs = (0.7394, 0.1769, 0.0837)
##
## Outer iteration: 2
## Iteration: 1 (-455676.9645, 1.4682)
## Iteration: 10 (-455436.9393, 0.6579)
## Iteration: 20 (-455253.3372, 0.5557)
## Iteration: 30 (-455109.0482, 0.4844)
## Iteration: 40 (-454991.0630, 0.4307)
## Iteration: 50 (-454891.9704, 0.3885)
## Group probs = (0.7470, 0.1743, 0.0787)

```

```
##
## Outer iteration: 3
## Iteration: 1 (-462023.8966, 0.4946)
## Iteration: 10 (-461942.5714, 0.3536)
## Iteration: 20 (-461867.1225, 0.3268)
## Iteration: 30 (-461800.9556, 0.3030)
## Iteration: 40 (-461742.1342, 0.2824)
## Iteration: 50 (-461689.3045, 0.2645)
## Group probs = (0.7508, 0.1729, 0.0763)
##
## Outer iteration: 4
## Iteration: 1 (-465159.7590, 0.4606)
## Iteration: 10 (-465114.5015, 0.2506)
## Iteration: 20 (-465069.1108, 0.2377)
## Iteration: 30 (-465027.6311, 0.2255)
## Iteration: 40 (-464989.4595, 0.2144)
## Iteration: 50 (-464954.1339, 0.2044)
## Group probs = (0.7511, 0.1730, 0.0759)
##
## Outer iteration: 5
## Iteration: 1 (-465242.0504, 0.2310)
## Iteration: 10 (-465210.7549, 0.1977)
## Iteration: 20 (-465178.3478, 0.1901)
## Iteration: 30 (-465148.0022, 0.1827)
## Iteration: 40 (-465119.4755, 0.1757)
## Iteration: 50 (-465092.5702, 0.1693)
## Group probs = (0.7515, 0.1726, 0.0759)
##
## Outer iteration: 6
## Iteration: 1 (-465345.0112, 0.2607)
## Iteration: 10 (-465320.4748, 0.1668)
## Iteration: 20 (-465295.0305, 0.1609)
## Iteration: 30 (-465270.9355, 0.1556)
## Iteration: 40 (-465248.0329, 0.1507)
## Iteration: 50 (-465226.2083, 0.1461)
## Group probs = (0.7515, 0.1725, 0.0759)
##
## Outer iteration: 7
## Iteration: 1 (-465189.2124, 0.1681)
## Iteration: 10 (-465169.2263, 0.1446)
## Iteration: 20 (-465148.1293, 0.1405)
## Iteration: 30 (-465127.9577, 0.1367)
## Iteration: 40 (-465108.6198, 0.1331)
## Iteration: 50 (-465090.0455, 0.1296)
## Group probs = (0.7502, 0.1732, 0.0766)
##
## Outer iteration: 8
## Iteration: 1 (-463851.6045, 0.1294)
## Iteration: 10 (-463834.2699, 0.1299)
## Iteration: 20 (-463816.0922, 0.1261)
## Iteration: 30 (-463798.6215, 0.1230)
## Iteration: 40 (-463781.7772, 0.1201)
## Iteration: 50 (-463765.5098, 0.1174)
## Group probs = (0.7495, 0.1739, 0.0766)
```

```
##
## Outer iteration: 9
## Iteration: 1 (-463139.7897, 0.2945)
## Iteration: 10 (-463124.4684, 0.1182)
## Iteration: 20 (-463108.5571, 0.1150)
## Iteration: 30 (-463093.2612, 0.1123)
## Iteration: 40 (-463078.4776, 0.1099)
## Iteration: 50 (-463064.1563, 0.1076)
## Group probs = (0.7486, 0.1740, 0.0774)
##
## Outer iteration: 10
## Iteration: 1 (-462115.8535, 0.3297)
## Iteration: 10 (-462102.1737, 0.1081)
## Iteration: 20 (-462087.5346, 0.1060)
## Iteration: 30 (-462073.3302, 0.1040)
## Iteration: 40 (-462059.5247, 0.1021)
## Iteration: 50 (-462046.0927, 0.1003)
## Group probs = (0.7465, 0.1753, 0.0782)
##
## Outer iteration: 11
## Iteration: 1 (-460174.6299, 0.1150)
## Iteration: 10 (-460161.9940, 0.1015)
## Iteration: 20 (-460148.6822, 0.0990)
## Iteration: 30 (-460135.7482, 0.0972)
## Iteration: 40 (-460123.1454, 0.0955)
## Iteration: 50 (-460110.8520, 0.0940)
## Group probs = (0.7468, 0.1750, 0.0782)
##
## Outer iteration: 12
## Iteration: 1 (-460193.2151, 0.2519)
## Iteration: 10 (-460181.7103, 0.0946)
## Iteration: 20 (-460169.4776, 0.0928)
## Iteration: 30 (-460157.5653, 0.0912)
## Iteration: 40 (-460145.9344, 0.0898)
## Iteration: 50 (-460134.5658, 0.0885)
## Group probs = (0.7450, 0.1760, 0.0790)
##
## Outer iteration: 13
## Iteration: 1 (-458548.6914, 0.1007)
## Iteration: 10 (-458537.9430, 0.0902)
## Iteration: 20 (-458526.5314, 0.0882)
## Iteration: 30 (-458515.4111, 0.0867)
## Iteration: 40 (-458504.5400, 0.0854)
## Iteration: 50 (-458493.8997, 0.0841)
## Group probs = (0.7465, 0.1748, 0.0787)
##
## Outer iteration: 14
## Iteration: 1 (-459702.7742, 0.0875)
## Iteration: 10 (-459692.7468, 0.0835)
## Iteration: 20 (-459681.9513, 0.0829)
## Iteration: 30 (-459671.3837, 0.0820)
## Iteration: 40 (-459661.0276, 0.0810)
## Iteration: 50 (-459650.8729, 0.0800)
## Group probs = (0.7473, 0.1742, 0.0785)
```

```
##
## Outer iteration: 15
## Iteration: 1 (-460379.2893, 0.0803)
## Iteration: 10 (-460370.0389, 0.0797)
## Iteration: 20 (-460359.9679, 0.0790)
## Iteration: 30 (-460350.0877, 0.0781)
## Iteration: 40 (-460340.3894, 0.0772)
## Iteration: 50 (-460330.8659, 0.0763)
## Group probs = (0.7466, 0.1745, 0.0790)
##
## Outer iteration: 16
## Iteration: 1 (-459555.6547, 0.1536)
## Iteration: 10 (-459546.6743, 0.0779)
## Iteration: 20 (-459537.2982, 0.0759)
## Iteration: 30 (-459528.1578, 0.0747)
## Iteration: 40 (-459519.1917, 0.0737)
## Iteration: 50 (-459510.3820, 0.0728)
## Group probs = (0.7439, 0.1761, 0.0801)
##
## Outer iteration: 17
## Iteration: 1 (-457064.4692, 0.1139)
## Iteration: 10 (-457055.7094, 0.0757)
## Iteration: 20 (-457046.8102, 0.0734)
## Iteration: 30 (-457038.1748, 0.0721)
## Iteration: 40 (-457029.7139, 0.0711)
## Iteration: 50 (-457021.4022, 0.0702)
## Group probs = (0.7429, 0.1767, 0.0804)
##
## Outer iteration: 18
## Iteration: 1 (-456117.5553, 0.0733)
## Iteration: 10 (-456109.7331, 0.0716)
## Iteration: 20 (-456101.3710, 0.0703)
## Iteration: 30 (-456093.1873, 0.0694)
## Iteration: 40 (-456085.1506, 0.0685)
## Iteration: 50 (-456077.2476, 0.0677)
## Group probs = (0.7424, 0.1769, 0.0806)
##
## Outer iteration: 19
## Iteration: 1 (-455654.1667, 0.0720)
## Iteration: 10 (-455646.8444, 0.0685)
## Iteration: 20 (-455638.8942, 0.0675)
## Iteration: 30 (-455631.0828, 0.0668)
## Iteration: 40 (-455623.3977, 0.0660)
## Iteration: 50 (-455615.8319, 0.0653)
## Group probs = (0.7397, 0.1785, 0.0817)
##
## Outer iteration: 20
## Iteration: 1 (-453125.5561, 0.0980)
## Iteration: 10 (-453118.2875, 0.0671)
## Iteration: 20 (-453110.6852, 0.0655)
## Iteration: 30 (-453103.2495, 0.0646)
## Iteration: 40 (-453095.9403, 0.0638)
## Iteration: 50 (-453088.7450, 0.0631)
## Group probs = (0.7420, 0.1771, 0.0809)
```

```
##
## Outer iteration: 21
## Iteration: 1 (-455136.0310, 0.0631)
## Iteration: 10 (-455129.1185, 0.0622)
## Iteration: 20 (-455121.7854, 0.0623)
## Iteration: 30 (-455114.5915, 0.0619)
## Iteration: 40 (-455107.5088, 0.0615)
## Iteration: 50 (-455100.5291, 0.0610)
## Group probs = (0.7413, 0.1774, 0.0813)
##
## Outer iteration: 22
## Iteration: 1 (-454420.2863, 0.1758)
## Iteration: 10 (-454413.7786, 0.0612)
## Iteration: 20 (-454406.6904, 0.0606)
## Iteration: 30 (-454399.7130, 0.0601)
## Iteration: 40 (-454392.8393, 0.0596)
## Iteration: 50 (-454386.0645, 0.0591)
## Group probs = (0.7419, 0.1771, 0.0811)
##
## Outer iteration: 23
## Iteration: 1 (-454905.8021, 0.1467)
## Iteration: 10 (-454899.6720, 0.0595)
## Iteration: 20 (-454893.0250, 0.0588)
## Iteration: 30 (-454886.4835, 0.0582)
## Iteration: 40 (-454880.0342, 0.0577)
## Iteration: 50 (-454873.6714, 0.0572)
## Group probs = (0.7395, 0.1784, 0.0821)
##
## Outer iteration: 24
## Iteration: 1 (-452686.3892, 0.0714)
## Iteration: 10 (-452680.0722, 0.0597)
## Iteration: 20 (-452673.6233, 0.0579)
## Iteration: 30 (-452667.3562, 0.0570)
## Iteration: 40 (-452661.2009, 0.0563)
## Iteration: 50 (-452655.1365, 0.0557)
## Group probs = (0.7416, 0.1770, 0.0814)
##
## Outer iteration: 25
## Iteration: 1 (-454483.4464, 0.1023)
## Iteration: 10 (-454477.7415, 0.0553)
## Iteration: 20 (-454471.6206, 0.0553)
## Iteration: 30 (-454465.5889, 0.0549)
## Iteration: 40 (-454459.6374, 0.0545)
## Iteration: 50 (-454453.7621, 0.0541)
## Group probs = (0.7425, 0.1764, 0.0812)
##
## Outer iteration: 26
## Iteration: 1 (-455209.1364, 0.0667)
## Iteration: 10 (-455203.6609, 0.0538)
## Iteration: 20 (-455197.7059, 0.0537)
## Iteration: 30 (-455191.8346, 0.0534)
## Iteration: 40 (-455186.0393, 0.0530)
## Iteration: 50 (-455180.3166, 0.0526)
## Group probs = (0.7414, 0.1769, 0.0817)
```

```
##
## Outer iteration: 27
## Iteration: 1 (-454205.7488, 0.0589)
## Iteration: 10 (-454200.4360, 0.0538)
## Iteration: 20 (-454194.7244, 0.0528)
## Iteration: 30 (-454189.1079, 0.0522)
## Iteration: 40 (-454183.5679, 0.0518)
## Iteration: 50 (-454178.0979, 0.0513)
## Group probs = (0.7393, 0.1779, 0.0828)
##
## Outer iteration: 28
## Iteration: 1 (-452262.2038, 0.1776)
## Iteration: 10 (-452256.8758, 0.0527)
## Iteration: 20 (-452251.1829, 0.0518)
## Iteration: 30 (-452245.5813, 0.0513)
## Iteration: 40 (-452240.0576, 0.0509)
## Iteration: 50 (-452234.6067, 0.0505)
## Group probs = (0.7378, 0.1787, 0.0835)
##
## Outer iteration: 29
## Iteration: 1 (-450892.4596, 0.0606)
## Iteration: 10 (-450887.1997, 0.0521)
## Iteration: 20 (-450881.6204, 0.0510)
## Iteration: 30 (-450876.1501, 0.0504)
## Iteration: 40 (-450870.7627, 0.0500)
## Iteration: 50 (-450865.4489, 0.0496)
## Group probs = (0.7366, 0.1793, 0.0841)
##
## Outer iteration: 30
## Iteration: 1 (-449690.5317, 0.0593)
## Iteration: 10 (-449685.4408, 0.0505)
## Iteration: 20 (-449679.9429, 0.0498)
## Iteration: 30 (-449674.5358, 0.0494)
## Iteration: 40 (-449669.2069, 0.0490)
## Iteration: 50 (-449663.9506, 0.0486)
## Group probs = (0.7361, 0.1796, 0.0842)
##
## Outer iteration: 31
## Iteration: 1 (-449291.4481, 0.1093)
## Iteration: 10 (-449286.4431, 0.0494)
## Iteration: 20 (-449281.0463, 0.0488)
## Iteration: 30 (-449275.7339, 0.0484)
## Iteration: 40 (-449270.4959, 0.0481)
## Iteration: 50 (-449265.3278, 0.0477)
## Group probs = (0.7366, 0.1794, 0.0840)
##
## Outer iteration: 32
## Iteration: 1 (-449648.1815, 0.0572)
## Iteration: 10 (-449643.3075, 0.0480)
## Iteration: 20 (-449638.0063, 0.0478)
## Iteration: 30 (-449632.7793, 0.0475)
## Iteration: 40 (-449627.6213, 0.0472)
## Iteration: 50 (-449622.5299, 0.0469)
## Group probs = (0.7350, 0.1803, 0.0847)
```

```
##
## Outer iteration: 33
## Iteration: 1 (-448264.7439, 0.0651)
## Iteration: 10 (-448259.8055, 0.0484)
## Iteration: 20 (-448254.5305, 0.0476)
## Iteration: 30 (-448249.3476, 0.0471)
## Iteration: 40 (-448244.2397, 0.0467)
## Iteration: 50 (-448239.2008, 0.0463)
## Group probs = (0.7360, 0.1795, 0.0845)
##
## Outer iteration: 34
## Iteration: 1 (-448932.5753, 0.0464)
## Iteration: 10 (-448927.7105, 0.0463)
## Iteration: 20 (-448922.4525, 0.0462)
## Iteration: 30 (-448917.2735, 0.0460)
## Iteration: 40 (-448912.1660, 0.0458)
## Iteration: 50 (-448907.1263, 0.0455)
## Group probs = (0.7357, 0.1798, 0.0845)
##
## Outer iteration: 35
## Iteration: 1 (-448754.0778, 0.1053)
## Iteration: 10 (-448749.4255, 0.0462)
## Iteration: 20 (-448744.3839, 0.0457)
## Iteration: 30 (-448739.4205, 0.0453)
## Iteration: 40 (-448734.5242, 0.0450)
## Iteration: 50 (-448729.6901, 0.0447)
## Group probs = (0.7371, 0.1788, 0.0841)
##
## Outer iteration: 36
## Iteration: 1 (-449814.1640, 0.1380)
## Iteration: 10 (-449809.5673, 0.0452)
## Iteration: 20 (-449804.6386, 0.0448)
## Iteration: 30 (-449799.7868, 0.0445)
## Iteration: 40 (-449795.0007, 0.0442)
## Iteration: 50 (-449790.2751, 0.0439)
## Group probs = (0.7340, 0.1805, 0.0855)
##
## Outer iteration: 37
## Iteration: 1 (-447072.1446, 0.0653)
## Iteration: 10 (-447067.1423, 0.0467)
## Iteration: 20 (-447062.1142, 0.0452)
## Iteration: 30 (-447057.2444, 0.0445)
## Iteration: 40 (-447052.4711, 0.0440)
## Iteration: 50 (-447047.7726, 0.0436)
## Group probs = (0.7340, 0.1803, 0.0857)
##
## Outer iteration: 38
## Iteration: 1 (-446994.4777, 0.1574)
## Iteration: 10 (-446989.8211, 0.0442)
## Iteration: 20 (-446984.7492, 0.0440)
## Iteration: 30 (-446979.7486, 0.0437)
## Iteration: 40 (-446974.8141, 0.0435)
## Iteration: 50 (-446969.9430, 0.0432)
## Group probs = (0.7328, 0.1810, 0.0862)
```

```

##
## Outer iteration: 39
## Iteration: 1 (-445837.2778, 0.1258)
## Iteration: 10 (-445832.5594, 0.0447)
## Iteration: 20 (-445827.5705, 0.0438)
## Iteration: 30 (-445822.6859, 0.0433)
## Iteration: 40 (-445817.8779, 0.0429)
## Iteration: 50 (-445813.1364, 0.0426)
## Group probs = (0.7322, 0.1812, 0.0867)
##
## Outer iteration: 40
## Iteration: 1 (-445282.0964, 0.4480)
## Iteration: 10 (-445276.9376, 0.0430)
## Iteration: 20 (-445271.5132, 0.0430)
## Iteration: 30 (-445266.1999, 0.0428)
## Iteration: 40 (-445260.9723, 0.0427)
## Iteration: 50 (-445255.8204, 0.0425)
## Group probs = (0.7294, 0.1825, 0.0880)
##
## Outer iteration: 1
## Iteration: 1 (-488520.0796,   Inf)
## Iteration: 10 (-455727.7525, 4.5886)
## Iteration: 20 (-452728.6178, 2.1538)
## Iteration: 30 (-451493.8524, 1.4335)
## Iteration: 40 (-450766.2474, 1.0865)
## Iteration: 50 (-450266.2330, 0.8810)
## Group probs = (0.7420, 0.1746, 0.0834)
##
## Outer iteration: 2
## Iteration: 1 (-457308.2186, 1.3096)
## Iteration: 10 (-457067.7481, 0.6585)
## Iteration: 20 (-456881.9637, 0.5573)
## Iteration: 30 (-456735.1973, 0.4863)
## Iteration: 40 (-456614.6960, 0.4328)
## Iteration: 50 (-456513.1507, 0.3906)
## Group probs = (0.7481, 0.1729, 0.0790)
##
## Outer iteration: 3
## Iteration: 1 (-462346.5450, 0.6447)
## Iteration: 10 (-462264.6410, 0.3566)
## Iteration: 20 (-462187.0984, 0.3294)
## Iteration: 30 (-462118.9853, 0.3054)
## Iteration: 40 (-462058.3739, 0.2847)
## Iteration: 50 (-462003.8898, 0.2667)
## Group probs = (0.7511, 0.1718, 0.0771)
##
## Outer iteration: 4
## Iteration: 1 (-464681.1207, 0.3287)
## Iteration: 10 (-464634.0407, 0.2532)
## Iteration: 20 (-464586.5783, 0.2405)
## Iteration: 30 (-464543.0968, 0.2283)
## Iteration: 40 (-464503.0023, 0.2172)
## Iteration: 50 (-464465.8339, 0.2072)
## Group probs = (0.7520, 0.1715, 0.0765)

```

```
##
## Outer iteration: 5
## Iteration: 1 (-465314.4241, 0.2154)
## Iteration: 10 (-465281.4590, 0.2010)
## Iteration: 20 (-465247.3051, 0.1931)
## Iteration: 30 (-465215.3200, 0.1855)
## Iteration: 40 (-465185.2465, 0.1785)
## Iteration: 50 (-465156.8766, 0.1721)
## Group probs = (0.7541, 0.1702, 0.0756)
##
## Outer iteration: 6
## Iteration: 1 (-467003.0433, 0.2041)
## Iteration: 10 (-466977.5637, 0.1682)
## Iteration: 20 (-466950.8205, 0.1630)
## Iteration: 30 (-466925.4402, 0.1579)
## Iteration: 40 (-466901.2856, 0.1530)
## Iteration: 50 (-466878.2446, 0.1485)
## Group probs = (0.7508, 0.1723, 0.0769)
##
## Outer iteration: 7
## Iteration: 1 (-463880.5616, 0.1580)
## Iteration: 10 (-463858.6633, 0.1492)
## Iteration: 20 (-463836.3551, 0.1439)
## Iteration: 30 (-463815.0976, 0.1396)
## Iteration: 40 (-463794.7340, 0.1358)
## Iteration: 50 (-463775.1797, 0.1323)
## Group probs = (0.7531, 0.1706, 0.0763)
##
## Outer iteration: 8
## Iteration: 1 (-465702.4554, 0.1321)
## Iteration: 10 (-465684.2605, 0.1306)
## Iteration: 20 (-465664.9099, 0.1281)
## Iteration: 30 (-465646.2654, 0.1253)
## Iteration: 40 (-465628.2718, 0.1225)
## Iteration: 50 (-465610.8836, 0.1199)
## Group probs = (0.7511, 0.1716, 0.0773)
##
## Outer iteration: 9
## Iteration: 1 (-463695.9783, 0.1332)
## Iteration: 10 (-463679.5343, 0.1212)
## Iteration: 20 (-463662.4920, 0.1174)
## Iteration: 30 (-463646.0636, 0.1147)
## Iteration: 40 (-463630.1569, 0.1123)
## Iteration: 50 (-463614.7306, 0.1101)
## Group probs = (0.7509, 0.1715, 0.0777)
##
## Outer iteration: 10
## Iteration: 1 (-463413.4523, 0.2039)
## Iteration: 10 (-463398.9563, 0.1103)
## Iteration: 20 (-463383.3570, 0.1083)
## Iteration: 30 (-463368.2088, 0.1064)
## Iteration: 40 (-463353.4822, 0.1045)
## Iteration: 50 (-463339.1525, 0.1027)
## Group probs = (0.7499, 0.1720, 0.0781)
```

```
##
## Outer iteration: 11
## Iteration: 1 (-462404.9334, 0.1552)
## Iteration: 10 (-462391.5753, 0.1039)
## Iteration: 20 (-462377.5477, 0.1012)
## Iteration: 30 (-462363.9394, 0.0993)
## Iteration: 40 (-462350.6857, 0.0976)
## Iteration: 50 (-462337.7604, 0.0960)
## Group probs = (0.7476, 0.1731, 0.0793)
##
## Outer iteration: 12
## Iteration: 1 (-460149.2047, 0.1804)
## Iteration: 10 (-460136.8042, 0.0976)
## Iteration: 20 (-460123.5954, 0.0955)
## Iteration: 30 (-460110.7314, 0.0939)
## Iteration: 40 (-460098.1764, 0.0925)
## Iteration: 50 (-460085.9114, 0.0911)
## Group probs = (0.7483, 0.1725, 0.0793)
##
## Outer iteration: 13
## Iteration: 1 (-460573.0367, 0.1276)
## Iteration: 10 (-460561.5011, 0.0906)
## Iteration: 20 (-460549.0359, 0.0898)
## Iteration: 30 (-460536.8638, 0.0887)
## Iteration: 40 (-460524.9643, 0.0876)
## Iteration: 50 (-460513.3226, 0.0865)
## Group probs = (0.7483, 0.1723, 0.0793)
##
## Outer iteration: 14
## Iteration: 1 (-460591.1880, 0.1651)
## Iteration: 10 (-460580.4346, 0.0864)
## Iteration: 20 (-460568.7856, 0.0853)
## Iteration: 30 (-460557.3911, 0.0843)
## Iteration: 40 (-460546.2358, 0.0833)
## Iteration: 50 (-460535.3080, 0.0823)
## Group probs = (0.7482, 0.1723, 0.0795)
##
## Outer iteration: 15
## Iteration: 1 (-460301.6539, 0.3472)
## Iteration: 10 (-460291.4648, 0.0837)
## Iteration: 20 (-460280.7949, 0.0818)
## Iteration: 30 (-460270.4010, 0.0806)
## Iteration: 40 (-460260.2227, 0.0795)
## Iteration: 50 (-460250.2394, 0.0785)
## Group probs = (0.7477, 0.1723, 0.0799)
##
## Outer iteration: 16
## Iteration: 1 (-459808.2790, 0.1009)
## Iteration: 10 (-459798.8991, 0.0796)
## Iteration: 20 (-459788.7474, 0.0784)
## Iteration: 30 (-459778.7996, 0.0774)
## Iteration: 40 (-459769.0393, 0.0765)
## Iteration: 50 (-459759.4566, 0.0756)
## Group probs = (0.7480, 0.1719, 0.0801)
```

```
##
## Outer iteration: 17
## Iteration: 1 (-459948.8825, 0.0871)
## Iteration: 10 (-459939.9249, 0.0757)
## Iteration: 20 (-459930.1938, 0.0751)
## Iteration: 30 (-459920.6420, 0.0743)
## Iteration: 40 (-459911.2608, 0.0736)
## Iteration: 50 (-459902.0434, 0.0728)
## Group probs = (0.7418, 0.1754, 0.0828)
##
## Outer iteration: 18
## Iteration: 1 (-454315.1496, 0.2047)
## Iteration: 10 (-454305.0642, 0.0774)
## Iteration: 20 (-454295.5415, 0.0741)
## Iteration: 30 (-454286.3718, 0.0726)
## Iteration: 40 (-454277.4080, 0.0715)
## Iteration: 50 (-454268.6141, 0.0707)
## Group probs = (0.7437, 0.1741, 0.0823)
##
## Outer iteration: 19
## Iteration: 1 (-455884.6389, 0.2954)
## Iteration: 10 (-455875.5478, 0.0700)
## Iteration: 20 (-455866.0164, 0.0701)
## Iteration: 30 (-455856.7353, 0.0698)
## Iteration: 40 (-455847.6469, 0.0693)
## Iteration: 50 (-455838.7311, 0.0688)
## Group probs = (0.7423, 0.1749, 0.0828)
##
## Outer iteration: 20
## Iteration: 1 (-454525.3881, 0.1409)
## Iteration: 10 (-454517.1922, 0.0700)
## Iteration: 20 (-454508.4821, 0.0686)
## Iteration: 30 (-454499.9598, 0.0677)
## Iteration: 40 (-454491.5902, 0.0670)
## Iteration: 50 (-454483.3615, 0.0664)
## Group probs = (0.7424, 0.1748, 0.0828)
##
## Outer iteration: 21
## Iteration: 1 (-454573.6257, 0.2240)
## Iteration: 10 (-454565.7917, 0.0680)
## Iteration: 20 (-454557.5716, 0.0666)
## Iteration: 30 (-454549.5581, 0.0657)
## Iteration: 40 (-454541.6947, 0.0649)
## Iteration: 50 (-454533.9623, 0.0643)
## Group probs = (0.7411, 0.1756, 0.0833)
##
## Outer iteration: 22
## Iteration: 1 (-453379.6551, 0.0943)
## Iteration: 10 (-453372.2269, 0.0655)
## Iteration: 20 (-453364.2249, 0.0647)
## Iteration: 30 (-453356.3638, 0.0641)
## Iteration: 40 (-453348.6307, 0.0635)
## Iteration: 50 (-453341.0193, 0.0629)
## Group probs = (0.7438, 0.1738, 0.0824)
```

```
##
## Outer iteration: 23
## Iteration: 1 (-455696.9635, 0.1061)
## Iteration: 10 (-455689.7661, 0.0624)
## Iteration: 20 (-455682.0493, 0.0623)
## Iteration: 30 (-455674.4608, 0.0619)
## Iteration: 40 (-455666.9902, 0.0615)
## Iteration: 50 (-455659.6322, 0.0610)
## Group probs = (0.7430, 0.1739, 0.0831)
##
## Outer iteration: 24
## Iteration: 1 (-454811.5613, 0.1922)
## Iteration: 10 (-454804.4326, 0.0619)
## Iteration: 20 (-454796.6909, 0.0613)
## Iteration: 30 (-454789.0822, 0.0607)
## Iteration: 40 (-454781.5962, 0.0602)
## Iteration: 50 (-454774.2271, 0.0598)
## Group probs = (0.7392, 0.1761, 0.0847)
##
## Outer iteration: 25
## Iteration: 1 (-451360.0303, 0.1235)
## Iteration: 10 (-451352.1035, 0.0637)
## Iteration: 20 (-451344.5343, 0.0610)
## Iteration: 30 (-451337.2861, 0.0598)
## Iteration: 40 (-451330.2071, 0.0590)
## Iteration: 50 (-451323.2545, 0.0584)
## Group probs = (0.7404, 0.1753, 0.0843)
##
## Outer iteration: 26
## Iteration: 1 (-452334.1901, 0.0600)
## Iteration: 10 (-452327.4567, 0.0588)
## Iteration: 20 (-452320.1580, 0.0585)
## Iteration: 30 (-452312.9762, 0.0582)
## Iteration: 40 (-452305.9033, 0.0577)
## Iteration: 50 (-452298.9348, 0.0573)
## Group probs = (0.7396, 0.1757, 0.0847)
##
## Outer iteration: 27
## Iteration: 1 (-451606.1148, 0.0962)
## Iteration: 10 (-451599.4071, 0.0582)
## Iteration: 20 (-451592.1354, 0.0577)
## Iteration: 30 (-451584.9779, 0.0572)
## Iteration: 40 (-451577.9274, 0.0568)
## Iteration: 50 (-451570.9798, 0.0564)
## Group probs = (0.7382, 0.1764, 0.0854)
##
## Outer iteration: 28
## Iteration: 1 (-450252.1043, 0.0951)
## Iteration: 10 (-450245.3406, 0.0583)
## Iteration: 20 (-450238.2160, 0.0570)
## Iteration: 30 (-450231.2577, 0.0562)
## Iteration: 40 (-450224.4199, 0.0557)
## Iteration: 50 (-450217.6869, 0.0552)
## Group probs = (0.7370, 0.1773, 0.0857)
```

```
##
## Outer iteration: 29
## Iteration: 1 (-449145.5211, 0.0553)
## Iteration: 10 (-449138.9925, 0.0568)
## Iteration: 20 (-449132.0725, 0.0557)
## Iteration: 30 (-449125.2996, 0.0551)
## Iteration: 40 (-449118.6391, 0.0546)
## Iteration: 50 (-449112.0781, 0.0541)
## Group probs = (0.7364, 0.1774, 0.0862)
##
## Outer iteration: 30
## Iteration: 1 (-448548.8962, 0.1750)
## Iteration: 10 (-448542.3099, 0.0548)
## Iteration: 20 (-448535.1974, 0.0545)
## Iteration: 30 (-448528.2000, 0.0542)
## Iteration: 40 (-448521.3059, 0.0539)
## Iteration: 50 (-448514.5102, 0.0535)
## Group probs = (0.7376, 0.1765, 0.0859)
##
## Outer iteration: 31
## Iteration: 1 (-449471.9306, 0.2587)
## Iteration: 10 (-449465.0403, 0.0531)
## Iteration: 20 (-449457.7028, 0.0532)
## Iteration: 30 (-449450.5291, 0.0530)
## Iteration: 40 (-449443.4825, 0.0528)
## Iteration: 50 (-449436.5475, 0.0526)
## Group probs = (0.7376, 0.1764, 0.0860)
##
## Outer iteration: 32
## Iteration: 1 (-449436.6558, 0.2916)
## Iteration: 10 (-449430.0866, 0.0541)
## Iteration: 20 (-449423.2484, 0.0529)
## Iteration: 30 (-449416.5872, 0.0523)
## Iteration: 40 (-449410.0435, 0.0518)
## Iteration: 50 (-449403.5966, 0.0514)
## Group probs = (0.7372, 0.1764, 0.0863)
##
## Outer iteration: 33
## Iteration: 1 (-448998.5047, 0.0524)
## Iteration: 10 (-448992.0964, 0.0521)
## Iteration: 20 (-448985.2321, 0.0518)
## Iteration: 30 (-448978.4722, 0.0515)
## Iteration: 40 (-448971.8037, 0.0512)
## Iteration: 50 (-448965.2227, 0.0509)
## Group probs = (0.7369, 0.1765, 0.0866)
##
## Outer iteration: 34
## Iteration: 1 (-448686.1323, 0.0516)
## Iteration: 10 (-448679.9305, 0.0519)
## Iteration: 20 (-448673.2384, 0.0511)
## Iteration: 30 (-448666.6601, 0.0507)
## Iteration: 40 (-448660.1754, 0.0503)
## Iteration: 50 (-448653.7759, 0.0499)
## Group probs = (0.7381, 0.1755, 0.0864)
```

```
##
## Outer iteration: 35
## Iteration: 1 (-449590.7515, 0.1244)
## Iteration: 10 (-449584.4160, 0.0498)
## Iteration: 20 (-449577.5963, 0.0498)
## Iteration: 30 (-449570.8880, 0.0497)
## Iteration: 40 (-449564.2733, 0.0495)
## Iteration: 50 (-449557.7454, 0.0492)
## Group probs = (0.7349, 0.1774, 0.0878)
##
## Outer iteration: 36
## Iteration: 1 (-446683.6499, 0.1420)
## Iteration: 10 (-446677.0061, 0.0519)
## Iteration: 20 (-446670.3264, 0.0502)
## Iteration: 30 (-446663.8586, 0.0493)
## Iteration: 40 (-446657.5140, 0.0488)
## Iteration: 50 (-446651.2637, 0.0484)
## Group probs = (0.7368, 0.1760, 0.0872)
##
## Outer iteration: 37
## Iteration: 1 (-448325.7260, 0.1701)
## Iteration: 10 (-448319.5063, 0.0478)
## Iteration: 20 (-448312.8830, 0.0480)
## Iteration: 30 (-448306.3771, 0.0479)
## Iteration: 40 (-448299.9615, 0.0478)
## Iteration: 50 (-448293.6269, 0.0475)
## Group probs = (0.7370, 0.1758, 0.0872)
##
## Outer iteration: 38
## Iteration: 1 (-448449.0690, 0.1506)
## Iteration: 10 (-448443.0415, 0.0473)
## Iteration: 20 (-448436.5022, 0.0473)
## Iteration: 30 (-448430.0652, 0.0471)
## Iteration: 40 (-448423.7149, 0.0469)
## Iteration: 50 (-448417.4443, 0.0467)
## Group probs = (0.7340, 0.1775, 0.0885)
##
## Outer iteration: 39
## Iteration: 1 (-445786.0373, 0.0481)
## Iteration: 10 (-445779.9194, 0.0485)
## Iteration: 20 (-445773.5559, 0.0472)
## Iteration: 30 (-445767.3258, 0.0467)
## Iteration: 40 (-445761.1863, 0.0463)
## Iteration: 50 (-445755.1237, 0.0460)
## Group probs = (0.7348, 0.1770, 0.0882)
##
## Outer iteration: 40
## Iteration: 1 (-446419.5352, 0.1734)
## Iteration: 10 (-446413.7504, 0.0455)
## Iteration: 20 (-446407.4843, 0.0455)
## Iteration: 30 (-446401.3093, 0.0454)
## Iteration: 40 (-446395.2112, 0.0453)
## Iteration: 50 (-446389.1839, 0.0451)
## Group probs = (0.7352, 0.1766, 0.0883)
```

```
##
## Outer iteration: 1
## Iteration: 1 (-486609.5680,   Inf)
## Iteration: 10 (-454042.6802,  4.5719)
## Iteration: 20 (-451077.0672,  2.1447)
## Iteration: 30 (-449857.9518,  1.4270)
## Iteration: 40 (-449140.2887,  1.0813)
## Iteration: 50 (-448647.5296,  0.8766)
## Group probs = (0.7423, 0.1744, 0.0833)
##
## Outer iteration: 2
## Iteration: 1 (-458199.2271,  1.6433)
## Iteration: 10 (-457961.7810,  0.6492)
## Iteration: 20 (-457783.7452,  0.5476)
## Iteration: 30 (-457644.4246,  0.4769)
## Iteration: 40 (-457530.8320,  0.4237)
## Iteration: 50 (-457435.6436,  0.3819)
## Group probs = (0.7472, 0.1732, 0.0796)
##
## Outer iteration: 3
## Iteration: 1 (-462111.4344,  0.6226)
## Iteration: 10 (-462034.6450,  0.3484)
## Iteration: 20 (-461962.3197,  0.3210)
## Iteration: 30 (-461899.0462,  0.2972)
## Iteration: 40 (-461842.9479,  0.2767)
## Iteration: 50 (-461792.6853,  0.2591)
## Group probs = (0.7510, 0.1718, 0.0773)
##
## Outer iteration: 4
## Iteration: 1 (-465219.5814,  0.2676)
## Iteration: 10 (-465176.2853,  0.2447)
## Iteration: 20 (-465132.9693,  0.2324)
## Iteration: 30 (-465093.3552,  0.2205)
## Iteration: 40 (-465056.8797,  0.2098)
## Iteration: 50 (-465023.1106,  0.2000)
## Group probs = (0.7508, 0.1721, 0.0771)
##
## Outer iteration: 5
## Iteration: 1 (-464872.8525,  0.2336)
## Iteration: 10 (-464842.9467,  0.1936)
## Iteration: 20 (-464811.9651,  0.1859)
## Iteration: 30 (-464782.9418,  0.1786)
## Iteration: 40 (-464755.6524,  0.1719)
## Iteration: 50 (-464729.9120,  0.1657)
## Group probs = (0.7524, 0.1712, 0.0764)
##
## Outer iteration: 6
## Iteration: 1 (-466113.3427,  0.2450)
## Iteration: 10 (-466090.2292,  0.1619)
## Iteration: 20 (-466065.9938,  0.1568)
## Iteration: 30 (-466042.9980,  0.1518)
## Iteration: 40 (-466021.1161,  0.1472)
## Iteration: 50 (-466000.2465,  0.1428)
## Group probs = (0.7511, 0.1718, 0.0771)
```

```
##
## Outer iteration: 7
## Iteration: 1 (-464834.8929, 0.2842)
## Iteration: 10 (-464815.5490, 0.1413)
## Iteration: 20 (-464795.0729, 0.1375)
## Iteration: 30 (-464775.4526, 0.1338)
## Iteration: 40 (-464756.6145, 0.1304)
## Iteration: 50 (-464738.4985, 0.1272)
## Group probs = (0.7524, 0.1710, 0.0765)
##
## Outer iteration: 8
## Iteration: 1 (-465844.1395, 0.1331)
## Iteration: 10 (-465827.7049, 0.1252)
## Iteration: 20 (-465810.1126, 0.1227)
## Iteration: 30 (-465793.1361, 0.1201)
## Iteration: 40 (-465776.7319, 0.1175)
## Iteration: 50 (-465760.8622, 0.1150)
## Group probs = (0.7502, 0.1724, 0.0774)
##
## Outer iteration: 9
## Iteration: 1 (-463745.6257, 0.2273)
## Iteration: 10 (-463730.4328, 0.1165)
## Iteration: 20 (-463714.8702, 0.1129)
## Iteration: 30 (-463699.8736, 0.1103)
## Iteration: 40 (-463685.3430, 0.1080)
## Iteration: 50 (-463671.2388, 0.1058)
## Group probs = (0.7521, 0.1712, 0.0767)
##
## Outer iteration: 10
## Iteration: 1 (-465306.8014, 0.2167)
## Iteration: 10 (-465293.6649, 0.1059)
## Iteration: 20 (-465279.6983, 0.1039)
## Iteration: 30 (-465266.1537, 0.1019)
## Iteration: 40 (-465252.9843, 0.1001)
## Iteration: 50 (-465240.1618, 0.0983)
## Group probs = (0.7483, 0.1731, 0.0785)
##
## Outer iteration: 11
## Iteration: 1 (-461757.0377, 0.2281)
## Iteration: 10 (-461744.6487, 0.1002)
## Iteration: 20 (-461731.6187, 0.0977)
## Iteration: 30 (-461718.9492, 0.0958)
## Iteration: 40 (-461706.5948, 0.0942)
## Iteration: 50 (-461694.5337, 0.0927)
## Group probs = (0.7504, 0.1719, 0.0777)
##
## Outer iteration: 12
## Iteration: 1 (-463462.2368, 0.1857)
## Iteration: 10 (-463451.1793, 0.0923)
## Iteration: 20 (-463439.2713, 0.0910)
## Iteration: 30 (-463427.6397, 0.0897)
## Iteration: 40 (-463416.2646, 0.0884)
## Iteration: 50 (-463405.1324, 0.0871)
## Group probs = (0.7482, 0.1728, 0.0790)
```

```
##
## Outer iteration: 13
## Iteration: 1 (-461369.9287, 0.1218)
## Iteration: 10 (-461359.3271, 0.0890)
## Iteration: 20 (-461348.0827, 0.0869)
## Iteration: 30 (-461337.1117, 0.0854)
## Iteration: 40 (-461326.3743, 0.0842)
## Iteration: 50 (-461315.8543, 0.0831)
## Group probs = (0.7470, 0.1733, 0.0797)
##
## Outer iteration: 14
## Iteration: 1 (-460185.9676, 0.2520)
## Iteration: 10 (-460176.0479, 0.0837)
## Iteration: 20 (-460165.3472, 0.0824)
## Iteration: 30 (-460154.8743, 0.0814)
## Iteration: 40 (-460144.6115, 0.0804)
## Iteration: 50 (-460134.5472, 0.0794)
## Group probs = (0.7469, 0.1734, 0.0797)
##
## Outer iteration: 15
## Iteration: 1 (-459968.2650, 0.2122)
## Iteration: 10 (-459958.9812, 0.0802)
## Iteration: 20 (-459949.0972, 0.0786)
## Iteration: 30 (-459939.4293, 0.0775)
## Iteration: 40 (-459929.9409, 0.0765)
## Iteration: 50 (-459920.6196, 0.0756)
## Group probs = (0.7470, 0.1733, 0.0797)
##
## Outer iteration: 16
## Iteration: 1 (-460038.7856, 0.0757)
## Iteration: 10 (-460030.2162, 0.0761)
## Iteration: 20 (-460020.8920, 0.0752)
## Iteration: 30 (-460011.7349, 0.0744)
## Iteration: 40 (-460002.7343, 0.0735)
## Iteration: 50 (-459993.8830, 0.0727)
## Group probs = (0.7452, 0.1741, 0.0806)
##
## Outer iteration: 17
## Iteration: 1 (-458328.7718, 0.3828)
## Iteration: 10 (-458320.2274, 0.0732)
## Iteration: 20 (-458311.0743, 0.0724)
## Iteration: 30 (-458302.1061, 0.0717)
## Iteration: 40 (-458293.3019, 0.0710)
## Iteration: 50 (-458284.6502, 0.0703)
## Group probs = (0.7478, 0.1723, 0.0798)
##
## Outer iteration: 18
## Iteration: 1 (-460479.2045, 0.1563)
## Iteration: 10 (-460471.1718, 0.0693)
## Iteration: 20 (-460462.5757, 0.0690)
## Iteration: 30 (-460454.1343, 0.0685)
## Iteration: 40 (-460445.8328, 0.0679)
## Iteration: 50 (-460437.6633, 0.0673)
## Group probs = (0.7466, 0.1731, 0.0803)
```

```
##
## Outer iteration: 19
## Iteration: 1 (-459381.0337, 0.0678)
## Iteration: 10 (-459373.5982, 0.0681)
## Iteration: 20 (-459365.5510, 0.0671)
## Iteration: 30 (-459357.6356, 0.0664)
## Iteration: 40 (-459349.8404, 0.0658)
## Iteration: 50 (-459342.1595, 0.0651)
## Group probs = (0.7476, 0.1723, 0.0801)
##
## Outer iteration: 20
## Iteration: 1 (-460187.2672, 0.0751)
## Iteration: 10 (-460180.1530, 0.0650)
## Iteration: 20 (-460172.3922, 0.0646)
## Iteration: 30 (-460164.7502, 0.0641)
## Iteration: 40 (-460157.2212, 0.0636)
## Iteration: 50 (-460149.8010, 0.0631)
## Group probs = (0.7461, 0.1729, 0.0810)
##
## Outer iteration: 21
## Iteration: 1 (-458791.5725, 0.0900)
## Iteration: 10 (-458784.6463, 0.0642)
## Iteration: 20 (-458777.1703, 0.0631)
## Iteration: 30 (-458769.8224, 0.0624)
## Iteration: 40 (-458762.5860, 0.0618)
## Iteration: 50 (-458755.4544, 0.0613)
## Group probs = (0.7476, 0.1719, 0.0805)
##
## Outer iteration: 22
## Iteration: 1 (-459992.2924, 0.0667)
## Iteration: 10 (-459985.6305, 0.0605)
## Iteration: 20 (-459978.4738, 0.0605)
## Iteration: 30 (-459971.4352, 0.0602)
## Iteration: 40 (-459964.4982, 0.0598)
## Iteration: 50 (-459957.6567, 0.0594)
## Group probs = (0.7452, 0.1731, 0.0817)
##
## Outer iteration: 23
## Iteration: 1 (-457786.6695, 0.1471)
## Iteration: 10 (-457780.0659, 0.0611)
## Iteration: 20 (-457773.1351, 0.0597)
## Iteration: 30 (-457766.3520, 0.0589)
## Iteration: 40 (-457759.6772, 0.0583)
## Iteration: 50 (-457753.0988, 0.0579)
## Group probs = (0.7424, 0.1746, 0.0830)
##
## Outer iteration: 24
## Iteration: 1 (-455216.9445, 0.0761)
## Iteration: 10 (-455210.4754, 0.0604)
## Iteration: 20 (-455203.8618, 0.0585)
## Iteration: 30 (-455197.4201, 0.0576)
## Iteration: 40 (-455191.0884, 0.0570)
## Iteration: 50 (-455184.8485, 0.0564)
## Group probs = (0.7415, 0.1751, 0.0834)
```

```
##
## Outer iteration: 25
## Iteration: 1 (-454291.8709, 0.0841)
## Iteration: 10 (-454285.9717, 0.0578)
## Iteration: 20 (-454279.6913, 0.0566)
## Iteration: 30 (-454273.5367, 0.0559)
## Iteration: 40 (-454267.4766, 0.0554)
## Iteration: 50 (-454261.4998, 0.0549)
## Group probs = (0.7429, 0.1745, 0.0826)
##
## Outer iteration: 26
## Iteration: 1 (-455614.6910, 0.1084)
## Iteration: 10 (-455608.9995, 0.0546)
## Iteration: 20 (-455602.8799, 0.0547)
## Iteration: 30 (-455596.8598, 0.0544)
## Iteration: 40 (-455590.9233, 0.0541)
## Iteration: 50 (-455585.0649, 0.0537)
## Group probs = (0.7438, 0.1738, 0.0824)
##
## Outer iteration: 27
## Iteration: 1 (-456356.3091, 0.0790)
## Iteration: 10 (-456350.8481, 0.0532)
## Iteration: 20 (-456344.9043, 0.0531)
## Iteration: 30 (-456339.0477, 0.0529)
## Iteration: 40 (-456333.2702, 0.0526)
## Iteration: 50 (-456327.5676, 0.0522)
## Group probs = (0.7420, 0.1748, 0.0833)
##
## Outer iteration: 28
## Iteration: 1 (-454663.8327, 0.2538)
## Iteration: 10 (-454658.2936, 0.0530)
## Iteration: 20 (-454652.3504, 0.0524)
## Iteration: 30 (-454646.5069, 0.0520)
## Iteration: 40 (-454640.7512, 0.0517)
## Iteration: 50 (-454635.0769, 0.0514)
## Group probs = (0.7419, 0.1746, 0.0835)
##
## Outer iteration: 29
## Iteration: 1 (-454534.6430, 0.0535)
## Iteration: 10 (-454529.3227, 0.0519)
## Iteration: 20 (-454523.5385, 0.0514)
## Iteration: 30 (-454517.8473, 0.0510)
## Iteration: 40 (-454512.2397, 0.0507)
## Iteration: 50 (-454506.7105, 0.0503)
## Group probs = (0.7431, 0.1736, 0.0833)
##
## Outer iteration: 30
## Iteration: 1 (-455467.2392, 0.1676)
## Iteration: 10 (-455462.0775, 0.0507)
## Iteration: 20 (-455456.5453, 0.0503)
## Iteration: 30 (-455451.0972, 0.0499)
## Iteration: 40 (-455445.7242, 0.0496)
## Iteration: 50 (-455440.4218, 0.0492)
## Group probs = (0.7441, 0.1728, 0.0831)
```

```
##
## Outer iteration: 31
## Iteration: 1 (-456237.0066, 0.1458)
## Iteration: 10 (-456232.1182, 0.0492)
## Iteration: 20 (-456226.8523, 0.0489)
## Iteration: 30 (-456221.6569, 0.0486)
## Iteration: 40 (-456216.5266, 0.0483)
## Iteration: 50 (-456211.4587, 0.0480)
## Group probs = (0.7412, 0.1743, 0.0845)
##
## Outer iteration: 32
## Iteration: 1 (-453641.1087, 0.1520)
## Iteration: 10 (-453636.0356, 0.0501)
## Iteration: 20 (-453630.7445, 0.0489)
## Iteration: 30 (-453625.5593, 0.0483)
## Iteration: 40 (-453620.4524, 0.0479)
## Iteration: 50 (-453615.4145, 0.0475)
## Group probs = (0.7400, 0.1751, 0.0850)
##
## Outer iteration: 33
## Iteration: 1 (-452500.8954, 0.0887)
## Iteration: 10 (-452496.0136, 0.0491)
## Iteration: 20 (-452490.8808, 0.0480)
## Iteration: 30 (-452485.8655, 0.0474)
## Iteration: 40 (-452480.9321, 0.0469)
## Iteration: 50 (-452476.0674, 0.0466)
## Group probs = (0.7402, 0.1751, 0.0847)
##
## Outer iteration: 34
## Iteration: 1 (-452671.0578, 0.1168)
## Iteration: 10 (-452666.5173, 0.0472)
## Iteration: 20 (-452661.6104, 0.0467)
## Iteration: 30 (-452656.7846, 0.0463)
## Iteration: 40 (-452652.0260, 0.0459)
## Iteration: 50 (-452647.3285, 0.0456)
## Group probs = (0.7370, 0.1768, 0.0862)
##
## Outer iteration: 35
## Iteration: 1 (-449737.9062, 0.2973)
## Iteration: 10 (-449732.9738, 0.0473)
## Iteration: 20 (-449727.8331, 0.0465)
## Iteration: 30 (-449722.7812, 0.0461)
## Iteration: 40 (-449717.8030, 0.0457)
## Iteration: 50 (-449712.8931, 0.0454)
## Group probs = (0.7376, 0.1763, 0.0861)
##
## Outer iteration: 36
## Iteration: 1 (-450190.3700, 0.0820)
## Iteration: 10 (-450185.7730, 0.0457)
## Iteration: 20 (-450180.7687, 0.0454)
## Iteration: 30 (-450175.8380, 0.0451)
## Iteration: 40 (-450170.9751, 0.0448)
## Iteration: 50 (-450166.1767, 0.0446)
## Group probs = (0.7385, 0.1757, 0.0858)
```

```

##
## Outer iteration: 37
## Iteration: 1 (-450994.5327, 0.1879)
## Iteration: 10 (-450989.6596, 0.0445)
## Iteration: 20 (-450984.4457, 0.0446)
## Iteration: 30 (-450979.3353, 0.0445)
## Iteration: 40 (-450974.3072, 0.0444)
## Iteration: 50 (-450969.3525, 0.0442)
## Group probs = (0.7396, 0.1749, 0.0856)
##
## Outer iteration: 38
## Iteration: 1 (-451890.2392, 0.0608)
## Iteration: 10 (-451885.5356, 0.0443)
## Iteration: 20 (-451880.4318, 0.0442)
## Iteration: 30 (-451875.4051, 0.0440)
## Iteration: 40 (-451870.4496, 0.0438)
## Iteration: 50 (-451865.5616, 0.0436)
## Group probs = (0.7371, 0.1761, 0.0868)
##
## Outer iteration: 39
## Iteration: 1 (-449600.7904, 0.2160)
## Iteration: 10 (-449595.7909, 0.0451)
## Iteration: 20 (-449590.4844, 0.0444)
## Iteration: 30 (-449585.2762, 0.0440)
## Iteration: 40 (-449580.1507, 0.0438)
## Iteration: 50 (-449575.1009, 0.0435)
## Group probs = (0.7383, 0.1751, 0.0866)
##
## Outer iteration: 40
## Iteration: 1 (-450534.8964, 0.0729)
## Iteration: 10 (-450530.0112, 0.0436)
## Iteration: 20 (-450524.7489, 0.0435)
## Iteration: 30 (-450519.5714, 0.0434)
## Iteration: 40 (-450514.4711, 0.0432)
## Iteration: 50 (-450509.4434, 0.0430)
## Group probs = (0.7381, 0.1751, 0.0868)
##
## Outer iteration: 1
## Iteration: 1 (-487063.1417, Inf)
## Iteration: 10 (-454439.3851, 4.5844)
## Iteration: 20 (-451464.7523, 2.1502)
## Iteration: 30 (-450243.3399, 1.4301)
## Iteration: 40 (-449524.7927, 1.0833)
## Iteration: 50 (-449031.5337, 0.8780)
## Group probs = (0.7452, 0.1738, 0.0810)
##
## Outer iteration: 2
## Iteration: 1 (-460958.2664, 1.7648)
## Iteration: 10 (-460719.7040, 0.6539)
## Iteration: 20 (-460538.3835, 0.5525)
## Iteration: 30 (-460395.9046, 0.4816)
## Iteration: 40 (-460279.4195, 0.4281)
## Iteration: 50 (-460181.6075, 0.3861)
## Group probs = (0.7486, 0.1735, 0.0780)

```

```

##
## Outer iteration: 3
## Iteration: 1 (-463503.4124, 0.5059)
## Iteration: 10 (-463424.4028, 0.3532)
## Iteration: 20 (-463349.5364, 0.3256)
## Iteration: 30 (-463283.8925, 0.3016)
## Iteration: 40 (-463225.5867, 0.2809)
## Iteration: 50 (-463173.2643, 0.2631)
## Group probs = (0.7510, 0.1725, 0.0765)
##
## Outer iteration: 4
## Iteration: 1 (-465316.4824, 0.2748)
## Iteration: 10 (-465271.2680, 0.2497)
## Iteration: 20 (-465225.6961, 0.2369)
## Iteration: 30 (-465183.9666, 0.2248)
## Iteration: 40 (-465145.5135, 0.2138)
## Iteration: 50 (-465109.8916, 0.2039)
## Group probs = (0.7530, 0.1715, 0.0755)
##
## Outer iteration: 5
## Iteration: 1 (-466817.1061, 0.3171)
## Iteration: 10 (-466785.5555, 0.1972)
## Iteration: 20 (-466752.9562, 0.1896)
## Iteration: 30 (-466722.4637, 0.1821)
## Iteration: 40 (-466693.8212, 0.1752)
## Iteration: 50 (-466666.8230, 0.1688)
## Group probs = (0.7522, 0.1723, 0.0755)
##
## Outer iteration: 6
## Iteration: 1 (-466055.5087, 0.2415)
## Iteration: 10 (-466030.8911, 0.1666)
## Iteration: 20 (-466005.4822, 0.1606)
## Iteration: 30 (-465981.4661, 0.1553)
## Iteration: 40 (-465958.6602, 0.1503)
## Iteration: 50 (-465936.9391, 0.1457)
## Group probs = (0.7532, 0.1715, 0.0753)
##
## Outer iteration: 7
## Iteration: 1 (-466722.8451, 0.1531)
## Iteration: 10 (-466702.7943, 0.1440)
## Iteration: 20 (-466681.5555, 0.1402)
## Iteration: 30 (-466661.2300, 0.1365)
## Iteration: 40 (-466641.7359, 0.1329)
## Iteration: 50 (-466623.0055, 0.1295)
## Group probs = (0.7530, 0.1714, 0.0757)
##
## Outer iteration: 8
## Iteration: 1 (-466299.7345, 0.1621)
## Iteration: 10 (-466282.4628, 0.1288)
## Iteration: 20 (-466264.0310, 0.1257)
## Iteration: 30 (-466246.2688, 0.1228)
## Iteration: 40 (-466229.1233, 0.1201)
## Iteration: 50 (-466212.5513, 0.1174)
## Group probs = (0.7524, 0.1715, 0.0761)

```

```
##
## Outer iteration: 9
## Iteration: 1 (-465651.1737, 0.1185)
## Iteration: 10 (-465635.8759, 0.1173)
## Iteration: 20 (-465619.5157, 0.1147)
## Iteration: 30 (-465603.6786, 0.1123)
## Iteration: 40 (-465588.3230, 0.1101)
## Iteration: 50 (-465573.4182, 0.1080)
## Group probs = (0.7485, 0.1735, 0.0780)
##
## Outer iteration: 10
## Iteration: 1 (-461970.7996, 0.1453)
## Iteration: 10 (-461956.1292, 0.1106)
## Iteration: 20 (-461941.1378, 0.1070)
## Iteration: 30 (-461926.6525, 0.1047)
## Iteration: 40 (-461912.5808, 0.1027)
## Iteration: 50 (-461898.8890, 0.1009)
## Group probs = (0.7485, 0.1736, 0.0779)
##
## Outer iteration: 11
## Iteration: 1 (-461913.8993, 0.1010)
## Iteration: 10 (-461901.2577, 0.1013)
## Iteration: 20 (-461887.7187, 0.0993)
## Iteration: 30 (-461874.5457, 0.0976)
## Iteration: 40 (-461861.7050, 0.0960)
## Iteration: 50 (-461849.1765, 0.0945)
## Group probs = (0.7488, 0.1733, 0.0779)
##
## Outer iteration: 12
## Iteration: 1 (-462000.6721, 0.1005)
## Iteration: 10 (-461989.0553, 0.0947)
## Iteration: 20 (-461976.4912, 0.0933)
## Iteration: 30 (-461964.2257, 0.0919)
## Iteration: 40 (-461952.2406, 0.0906)
## Iteration: 50 (-461940.5218, 0.0892)
## Group probs = (0.7481, 0.1735, 0.0784)
##
## Outer iteration: 13
## Iteration: 1 (-461232.7783, 0.0893)
## Iteration: 10 (-461221.9395, 0.0899)
## Iteration: 20 (-461210.2440, 0.0883)
## Iteration: 30 (-461198.8137, 0.0870)
## Iteration: 40 (-461187.6275, 0.0858)
## Iteration: 50 (-461176.6726, 0.0846)
## Group probs = (0.7476, 0.1737, 0.0787)
##
## Outer iteration: 14
## Iteration: 1 (-460621.2139, 0.0878)
## Iteration: 10 (-460611.0597, 0.0857)
## Iteration: 20 (-460600.2015, 0.0839)
## Iteration: 30 (-460589.5928, 0.0827)
## Iteration: 40 (-460579.2004, 0.0816)
## Iteration: 50 (-460569.0105, 0.0805)
## Group probs = (0.7464, 0.1743, 0.0793)
```

```
##
## Outer iteration: 15
## Iteration: 1 (-459490.7193, 0.0836)
## Iteration: 10 (-459481.1365, 0.0820)
## Iteration: 20 (-459470.9386, 0.0803)
## Iteration: 30 (-459460.9746, 0.0791)
## Iteration: 40 (-459451.2067, 0.0780)
## Iteration: 50 (-459441.6206, 0.0770)
## Group probs = (0.7496, 0.1722, 0.0782)
##
## Outer iteration: 16
## Iteration: 1 (-462223.7985, 0.0782)
## Iteration: 10 (-462214.6332, 0.0760)
## Iteration: 20 (-462204.9276, 0.0759)
## Iteration: 30 (-462195.4178, 0.0753)
## Iteration: 40 (-462186.0797, 0.0745)
## Iteration: 50 (-462176.9044, 0.0738)
## Group probs = (0.7453, 0.1745, 0.0803)
##
## Outer iteration: 17
## Iteration: 1 (-458187.0724, 0.1453)
## Iteration: 10 (-458177.8859, 0.0769)
## Iteration: 20 (-458168.5903, 0.0744)
## Iteration: 30 (-458159.5483, 0.0731)
## Iteration: 40 (-458150.6838, 0.0721)
## Iteration: 50 (-458141.9764, 0.0713)
## Group probs = (0.7466, 0.1738, 0.0796)
##
## Outer iteration: 18
## Iteration: 1 (-459335.6928, 0.0770)
## Iteration: 10 (-459327.7047, 0.0708)
## Iteration: 20 (-459319.0195, 0.0704)
## Iteration: 30 (-459310.4835, 0.0699)
## Iteration: 40 (-459302.0882, 0.0692)
## Iteration: 50 (-459293.8279, 0.0685)
## Group probs = (0.7451, 0.1745, 0.0804)
##
## Outer iteration: 19
## Iteration: 1 (-457903.0352, 0.1689)
## Iteration: 10 (-457895.2406, 0.0694)
## Iteration: 20 (-457886.8018, 0.0684)
## Iteration: 30 (-457878.5144, 0.0677)
## Iteration: 40 (-457870.3662, 0.0670)
## Iteration: 50 (-457862.3503, 0.0664)
## Group probs = (0.7431, 0.1757, 0.0813)
##
## Outer iteration: 20
## Iteration: 1 (-456028.3940, 0.1283)
## Iteration: 10 (-456020.8554, 0.0681)
## Iteration: 20 (-456012.9228, 0.0665)
## Iteration: 30 (-456005.1639, 0.0656)
## Iteration: 40 (-455997.5372, 0.0649)
## Iteration: 50 (-455990.0296, 0.0642)
## Group probs = (0.7410, 0.1767, 0.0823)
```

```
##
## Outer iteration: 21
## Iteration: 1 (-454089.0957, 0.0758)
## Iteration: 10 (-454081.7470, 0.0667)
## Iteration: 20 (-454074.0504, 0.0650)
## Iteration: 30 (-454066.5386, 0.0640)
## Iteration: 40 (-454059.1630, 0.0633)
## Iteration: 50 (-454051.9074, 0.0626)
## Group probs = (0.7419, 0.1762, 0.0819)
##
## Outer iteration: 22
## Iteration: 1 (-454822.7701, 0.1356)
## Iteration: 10 (-454816.1112, 0.0629)
## Iteration: 20 (-454808.8857, 0.0623)
## Iteration: 30 (-454801.7821, 0.0617)
## Iteration: 40 (-454794.7883, 0.0611)
## Iteration: 50 (-454787.8980, 0.0605)
## Group probs = (0.7407, 0.1767, 0.0825)
##
## Outer iteration: 23
## Iteration: 1 (-453741.2351, 0.2737)
## Iteration: 10 (-453734.5133, 0.0614)
## Iteration: 20 (-453727.2603, 0.0609)
## Iteration: 30 (-453720.1307, 0.0604)
## Iteration: 40 (-453713.1146, 0.0599)
## Iteration: 50 (-453706.2065, 0.0594)
## Group probs = (0.7396, 0.1774, 0.0831)
##
## Outer iteration: 24
## Iteration: 1 (-452615.4935, 0.1505)
## Iteration: 10 (-452608.9369, 0.0600)
## Iteration: 20 (-452601.8592, 0.0593)
## Iteration: 30 (-452594.9039, 0.0588)
## Iteration: 40 (-452588.0607, 0.0583)
## Iteration: 50 (-452581.3235, 0.0579)
## Group probs = (0.7368, 0.1789, 0.0843)
##
## Outer iteration: 25
## Iteration: 1 (-450099.1791, 0.3066)
## Iteration: 10 (-450092.3167, 0.0596)
## Iteration: 20 (-450085.1552, 0.0585)
## Iteration: 30 (-450078.1502, 0.0579)
## Iteration: 40 (-450071.2731, 0.0574)
## Iteration: 50 (-450064.5122, 0.0570)
## Group probs = (0.7359, 0.1797, 0.0843)
##
## Outer iteration: 26
## Iteration: 1 (-449293.0500, 0.4658)
## Iteration: 10 (-449286.3364, 0.0592)
## Iteration: 20 (-449279.7359, 0.0573)
## Iteration: 30 (-449273.4003, 0.0563)
## Iteration: 40 (-449267.2088, 0.0556)
## Iteration: 50 (-449261.1240, 0.0551)
## Group probs = (0.7347, 0.1804, 0.0849)
```

```
##
## Outer iteration: 27
## Iteration: 1 (-448167.7366, 0.1988)
## Iteration: 10 (-448161.6856, 0.0565)
## Iteration: 20 (-448155.1734, 0.0559)
## Iteration: 30 (-448148.7722, 0.0554)
## Iteration: 40 (-448142.4712, 0.0549)
## Iteration: 50 (-448136.2648, 0.0544)
## Group probs = (0.7338, 0.1809, 0.0853)
##
## Outer iteration: 28
## Iteration: 1 (-447293.7758, 0.1199)
## Iteration: 10 (-447287.7902, 0.0552)
## Iteration: 20 (-447281.3046, 0.0547)
## Iteration: 30 (-447274.9246, 0.0543)
## Iteration: 40 (-447268.6431, 0.0539)
## Iteration: 50 (-447262.4557, 0.0535)
## Group probs = (0.7326, 0.1818, 0.0855)
##
## Outer iteration: 29
## Iteration: 1 (-446256.9281, 0.0885)
## Iteration: 10 (-446250.9924, 0.0549)
## Iteration: 20 (-446244.7041, 0.0539)
## Iteration: 30 (-446238.5520, 0.0533)
## Iteration: 40 (-446232.5032, 0.0528)
## Iteration: 50 (-446226.5463, 0.0524)
## Group probs = (0.7361, 0.1796, 0.0843)
##
## Outer iteration: 30
## Iteration: 1 (-449206.7009, 0.0754)
## Iteration: 10 (-449200.5605, 0.0516)
## Iteration: 20 (-449194.2019, 0.0520)
## Iteration: 30 (-449187.9852, 0.0519)
## Iteration: 40 (-449181.8717, 0.0517)
## Iteration: 50 (-449175.8498, 0.0514)
## Group probs = (0.7353, 0.1798, 0.0849)
##
## Outer iteration: 31
## Iteration: 1 (-448360.0474, 0.0878)
## Iteration: 10 (-448354.2621, 0.0521)
## Iteration: 20 (-448347.9867, 0.0516)
## Iteration: 30 (-448341.8159, 0.0512)
## Iteration: 40 (-448335.7400, 0.0509)
## Iteration: 50 (-448329.7536, 0.0505)
## Group probs = (0.7363, 0.1790, 0.0847)
##
## Outer iteration: 32
## Iteration: 1 (-449227.2101, 0.0738)
## Iteration: 10 (-449221.4165, 0.0504)
## Iteration: 20 (-449215.1379, 0.0504)
## Iteration: 30 (-449208.9652, 0.0503)
## Iteration: 40 (-449202.8873, 0.0500)
## Iteration: 50 (-449196.8985, 0.0498)
## Group probs = (0.7383, 0.1775, 0.0843)
```

```
##
## Outer iteration: 33
## Iteration: 1 (-450860.2282, 0.0535)
## Iteration: 10 (-450854.3102, 0.0496)
## Iteration: 20 (-450847.9987, 0.0497)
## Iteration: 30 (-450841.8030, 0.0495)
## Iteration: 40 (-450835.7063, 0.0493)
## Iteration: 50 (-450829.7010, 0.0491)
## Group probs = (0.7402, 0.1756, 0.0842)
##
## Outer iteration: 34
## Iteration: 1 (-452409.4355, 0.1189)
## Iteration: 10 (-452403.1629, 0.0490)
## Iteration: 20 (-452396.6395, 0.0490)
## Iteration: 30 (-452390.2692, 0.0490)
## Iteration: 40 (-452384.0159, 0.0488)
## Iteration: 50 (-452377.8655, 0.0486)
## Group probs = (0.7390, 0.1760, 0.0850)
##
## Outer iteration: 35
## Iteration: 1 (-451274.9647, 0.1521)
## Iteration: 10 (-451269.0451, 0.0503)
## Iteration: 20 (-451262.8186, 0.0492)
## Iteration: 30 (-451256.7344, 0.0487)
## Iteration: 40 (-451250.7536, 0.0483)
## Iteration: 50 (-451244.8619, 0.0480)
## Group probs = (0.7379, 0.1763, 0.0858)
##
## Outer iteration: 36
## Iteration: 1 (-450214.5716, 0.1934)
## Iteration: 10 (-450208.7103, 0.0488)
## Iteration: 20 (-450202.3486, 0.0484)
## Iteration: 30 (-450196.0923, 0.0481)
## Iteration: 40 (-450189.9315, 0.0479)
## Iteration: 50 (-450183.8605, 0.0476)
## Group probs = (0.7368, 0.1769, 0.0864)
##
## Outer iteration: 37
## Iteration: 1 (-449124.8054, 0.1864)
## Iteration: 10 (-449118.8879, 0.0494)
## Iteration: 20 (-449112.6934, 0.0483)
## Iteration: 30 (-449106.6496, 0.0477)
## Iteration: 40 (-449100.7104, 0.0473)
## Iteration: 50 (-449094.8592, 0.0470)
## Group probs = (0.7362, 0.1770, 0.0868)
##
## Outer iteration: 38
## Iteration: 1 (-448537.2203, 0.0947)
## Iteration: 10 (-448531.5286, 0.0480)
## Iteration: 20 (-448525.3446, 0.0475)
## Iteration: 30 (-448519.2577, 0.0471)
## Iteration: 40 (-448513.2573, 0.0468)
## Iteration: 50 (-448507.3378, 0.0465)
## Group probs = (0.7366, 0.1766, 0.0868)
```

```

##
## Outer iteration: 39
## Iteration: 1 (-448789.8563, 0.0590)
## Iteration: 10 (-448784.2022, 0.0469)
## Iteration: 20 (-448778.0352, 0.0467)
## Iteration: 30 (-448771.9532, 0.0464)
## Iteration: 40 (-448765.9516, 0.0461)
## Iteration: 50 (-448760.0273, 0.0459)
## Group probs = (0.7370, 0.1762, 0.0868)
##
## Outer iteration: 40
## Iteration: 1 (-449048.4289, 0.0638)
## Iteration: 10 (-449042.8196, 0.0460)
## Iteration: 20 (-449036.6881, 0.0459)
## Iteration: 30 (-449030.6394, 0.0457)
## Iteration: 40 (-449024.6687, 0.0455)
## Iteration: 50 (-449018.7730, 0.0452)
## Group probs = (0.7360, 0.1768, 0.0872)
##
## Outer iteration: 1
## Iteration: 1 (-487649.6232, Inf)
## Iteration: 10 (-455124.1491, 4.5691)
## Iteration: 20 (-452165.2168, 2.1422)
## Iteration: 30 (-450948.9170, 1.4251)
## Iteration: 40 (-450232.5958, 1.0799)
## Iteration: 50 (-449740.4011, 0.8756)
## Group probs = (0.7430, 0.1754, 0.0816)
##
## Outer iteration: 2
## Iteration: 1 (-459293.8053, 1.9848)
## Iteration: 10 (-459059.1720, 0.6491)
## Iteration: 20 (-458880.8810, 0.5475)
## Iteration: 30 (-458741.4459, 0.4767)
## Iteration: 40 (-458627.8819, 0.4234)
## Iteration: 50 (-458532.8157, 0.3816)
## Group probs = (0.7442, 0.1766, 0.0791)
##
## Outer iteration: 3
## Iteration: 1 (-459887.6692, 0.3804)
## Iteration: 10 (-459809.7520, 0.3494)
## Iteration: 20 (-459736.4407, 0.3223)
## Iteration: 30 (-459672.1809, 0.2986)
## Iteration: 40 (-459615.1119, 0.2782)
## Iteration: 50 (-459563.9051, 0.2605)
## Group probs = (0.7498, 0.1745, 0.0757)
##
## Outer iteration: 4
## Iteration: 1 (-464738.7507, 0.3103)
## Iteration: 10 (-464694.4638, 0.2457)
## Iteration: 20 (-464650.4678, 0.2336)
## Iteration: 30 (-464610.2429, 0.2218)
## Iteration: 40 (-464573.2008, 0.2110)
## Iteration: 50 (-464538.9000, 0.2013)
## Group probs = (0.7511, 0.1742, 0.0747)

```

```
##
## Outer iteration: 5
## Iteration: 1 (-465724.5626, 0.2508)
## Iteration: 10 (-465694.1793, 0.1947)
## Iteration: 20 (-465662.7792, 0.1871)
## Iteration: 30 (-465633.4112, 0.1798)
## Iteration: 40 (-465605.8285, 0.1730)
## Iteration: 50 (-465579.8327, 0.1667)
## Group probs = (0.7513, 0.1742, 0.0745)
##
## Outer iteration: 6
## Iteration: 1 (-465687.3342, 0.1698)
## Iteration: 10 (-465663.7441, 0.1637)
## Iteration: 20 (-465639.0109, 0.1583)
## Iteration: 30 (-465615.5493, 0.1533)
## Iteration: 40 (-465593.2298, 0.1486)
## Iteration: 50 (-465571.9472, 0.1441)
## Group probs = (0.7514, 0.1742, 0.0744)
##
## Outer iteration: 7
## Iteration: 1 (-465574.3555, 0.2092)
## Iteration: 10 (-465554.8681, 0.1427)
## Iteration: 20 (-465534.3322, 0.1387)
## Iteration: 30 (-465514.6945, 0.1349)
## Iteration: 40 (-465495.8635, 0.1314)
## Iteration: 50 (-465477.7711, 0.1280)
## Group probs = (0.7513, 0.1743, 0.0744)
##
## Outer iteration: 8
## Iteration: 1 (-465383.7534, 0.1277)
## Iteration: 10 (-465367.1273, 0.1273)
## Iteration: 20 (-465349.4444, 0.1242)
## Iteration: 30 (-465332.4135, 0.1213)
## Iteration: 40 (-465315.9771, 0.1186)
## Iteration: 50 (-465300.0916, 0.1159)
## Group probs = (0.7487, 0.1759, 0.0754)
##
## Outer iteration: 9
## Iteration: 1 (-462943.8203, 0.1204)
## Iteration: 10 (-462928.5673, 0.1176)
## Iteration: 20 (-462912.7990, 0.1140)
## Iteration: 30 (-462897.5991, 0.1114)
## Iteration: 40 (-462882.8810, 0.1091)
## Iteration: 50 (-462868.6050, 0.1069)
## Group probs = (0.7503, 0.1748, 0.0749)
##
## Outer iteration: 10
## Iteration: 1 (-464091.0601, 0.1719)
## Iteration: 10 (-464077.7667, 0.1067)
## Iteration: 20 (-464063.5543, 0.1048)
## Iteration: 30 (-464049.7596, 0.1029)
## Iteration: 40 (-464036.3469, 0.1010)
## Iteration: 50 (-464023.2911, 0.0993)
## Group probs = (0.7480, 0.1760, 0.0761)
```

```
##
## Outer iteration: 11
## Iteration: 1 (-461877.4553, 0.1650)
## Iteration: 10 (-461865.0276, 0.1007)
## Iteration: 20 (-461851.8630, 0.0983)
## Iteration: 30 (-461839.0666, 0.0965)
## Iteration: 40 (-461826.5945, 0.0949)
## Iteration: 50 (-461814.4247, 0.0933)
## Group probs = (0.7498, 0.1749, 0.0753)
##
## Outer iteration: 12
## Iteration: 1 (-463462.6952, 0.2430)
## Iteration: 10 (-463451.5471, 0.0933)
## Iteration: 20 (-463439.6041, 0.0919)
## Iteration: 30 (-463427.9640, 0.0904)
## Iteration: 40 (-463416.5943, 0.0891)
## Iteration: 50 (-463405.4765, 0.0877)
## Group probs = (0.7453, 0.1777, 0.0770)
##
## Outer iteration: 13
## Iteration: 1 (-459354.4573, 0.0923)
## Iteration: 10 (-459342.9655, 0.0916)
## Iteration: 20 (-459331.7514, 0.0882)
## Iteration: 30 (-459320.9499, 0.0863)
## Iteration: 40 (-459310.4207, 0.0849)
## Iteration: 50 (-459300.1252, 0.0835)
## Group probs = (0.7444, 0.1781, 0.0775)
##
## Outer iteration: 14
## Iteration: 1 (-458405.1365, 0.0867)
## Iteration: 10 (-458395.3245, 0.0851)
## Iteration: 20 (-458384.8429, 0.0834)
## Iteration: 30 (-458374.6135, 0.0821)
## Iteration: 40 (-458364.6010, 0.0809)
## Iteration: 50 (-458354.7890, 0.0798)
## Group probs = (0.7457, 0.1771, 0.0772)
##
## Outer iteration: 15
## Iteration: 1 (-459458.4485, 0.1909)
## Iteration: 10 (-459449.1713, 0.0793)
## Iteration: 20 (-459439.1606, 0.0788)
## Iteration: 30 (-459429.3566, 0.0780)
## Iteration: 40 (-459419.7407, 0.0771)
## Iteration: 50 (-459410.3027, 0.0762)
## Group probs = (0.7445, 0.1778, 0.0777)
##
## Outer iteration: 16
## Iteration: 1 (-458330.6158, 0.0968)
## Iteration: 10 (-458322.0484, 0.0766)
## Iteration: 20 (-458312.7629, 0.0755)
## Iteration: 30 (-458303.6482, 0.0746)
## Iteration: 40 (-458294.6921, 0.0737)
## Iteration: 50 (-458285.8874, 0.0729)
## Group probs = (0.7450, 0.1774, 0.0776)
```

```
##
## Outer iteration: 17
## Iteration: 1 (-458702.3603, 0.0870)
## Iteration: 10 (-458694.2760, 0.0733)
## Iteration: 20 (-458685.4954, 0.0723)
## Iteration: 30 (-458676.8711, 0.0715)
## Iteration: 40 (-458668.3913, 0.0707)
## Iteration: 50 (-458660.0491, 0.0699)
## Group probs = (0.7448, 0.1774, 0.0778)
##
## Outer iteration: 18
## Iteration: 1 (-458409.2067, 0.1339)
## Iteration: 10 (-458401.5652, 0.0705)
## Iteration: 20 (-458393.2863, 0.0695)
## Iteration: 30 (-458385.1501, 0.0687)
## Iteration: 40 (-458377.1436, 0.0680)
## Iteration: 50 (-458369.2599, 0.0673)
## Group probs = (0.7427, 0.1784, 0.0788)
##
## Outer iteration: 19
## Iteration: 1 (-456413.7214, 0.1449)
## Iteration: 10 (-456406.2596, 0.0688)
## Iteration: 20 (-456398.2902, 0.0674)
## Iteration: 30 (-456390.4731, 0.0665)
## Iteration: 40 (-456382.7835, 0.0658)
## Iteration: 50 (-456375.2123, 0.0651)
## Group probs = (0.7434, 0.1780, 0.0786)
##
## Outer iteration: 20
## Iteration: 1 (-456945.1464, 0.0957)
## Iteration: 10 (-456938.1391, 0.0647)
## Iteration: 20 (-456930.5086, 0.0644)
## Iteration: 30 (-456922.9995, 0.0640)
## Iteration: 40 (-456915.6037, 0.0634)
## Iteration: 50 (-456908.3164, 0.0629)
## Group probs = (0.7420, 0.1790, 0.0791)
##
## Outer iteration: 21
## Iteration: 1 (-455686.5533, 0.0789)
## Iteration: 10 (-455679.8669, 0.0638)
## Iteration: 20 (-455672.6903, 0.0627)
## Iteration: 30 (-455665.6359, 0.0619)
## Iteration: 40 (-455658.6848, 0.0613)
## Iteration: 50 (-455651.8305, 0.0607)
## Group probs = (0.7387, 0.1807, 0.0807)
##
## Outer iteration: 22
## Iteration: 1 (-452611.7867, 0.2943)
## Iteration: 10 (-452604.8731, 0.0633)
## Iteration: 20 (-452597.7354, 0.0616)
## Iteration: 30 (-452590.7634, 0.0608)
## Iteration: 40 (-452583.9131, 0.0601)
## Iteration: 50 (-452577.1704, 0.0595)
## Group probs = (0.7417, 0.1787, 0.0796)
```

```
##
## Outer iteration: 23
## Iteration: 1 (-455213.3374, 0.0690)
## Iteration: 10 (-455206.6996, 0.0583)
## Iteration: 20 (-455199.7173, 0.0586)
## Iteration: 30 (-455192.8817, 0.0584)
## Iteration: 40 (-455186.1600, 0.0581)
## Iteration: 50 (-455179.5412, 0.0577)
## Group probs = (0.7399, 0.1797, 0.0805)
##
## Outer iteration: 24
## Iteration: 1 (-453516.1200, 0.0664)
## Iteration: 10 (-453510.0016, 0.0588)
## Iteration: 20 (-453503.4573, 0.0577)
## Iteration: 30 (-453497.0326, 0.0570)
## Iteration: 40 (-453490.7054, 0.0565)
## Iteration: 50 (-453484.4676, 0.0560)
## Group probs = (0.7406, 0.1792, 0.0802)
##
## Outer iteration: 25
## Iteration: 1 (-454191.0877, 0.1047)
## Iteration: 10 (-454185.2300, 0.0560)
## Iteration: 20 (-454178.8454, 0.0558)
## Iteration: 30 (-454172.5566, 0.0555)
## Iteration: 40 (-454166.3579, 0.0551)
## Iteration: 50 (-454160.2454, 0.0547)
## Group probs = (0.7405, 0.1791, 0.0804)
##
## Outer iteration: 26
## Iteration: 1 (-454000.3163, 0.1369)
## Iteration: 10 (-453994.5397, 0.0550)
## Iteration: 20 (-453988.2480, 0.0546)
## Iteration: 30 (-453982.0570, 0.0542)
## Iteration: 40 (-453975.9596, 0.0539)
## Iteration: 50 (-453969.9507, 0.0535)
## Group probs = (0.7406, 0.1789, 0.0804)
##
## Outer iteration: 27
## Iteration: 1 (-454039.5289, 0.1951)
## Iteration: 10 (-454034.0591, 0.0540)
## Iteration: 20 (-454028.1651, 0.0534)
## Iteration: 30 (-454022.3665, 0.0529)
## Iteration: 40 (-454016.6495, 0.0525)
## Iteration: 50 (-454011.0082, 0.0521)
## Group probs = (0.7375, 0.1807, 0.0818)
##
## Outer iteration: 28
## Iteration: 1 (-451173.1377, 0.1335)
## Iteration: 10 (-451167.4501, 0.0545)
## Iteration: 20 (-451161.5926, 0.0530)
## Iteration: 30 (-451155.8703, 0.0523)
## Iteration: 40 (-451150.2424, 0.0518)
## Iteration: 50 (-451144.6960, 0.0513)
## Group probs = (0.7390, 0.1798, 0.0812)
```

```
##
## Outer iteration: 29
## Iteration: 1 (-452544.5679, 0.1008)
## Iteration: 10 (-452539.3686, 0.0514)
## Iteration: 20 (-452533.7263, 0.0512)
## Iteration: 30 (-452528.1666, 0.0509)
## Iteration: 40 (-452522.6828, 0.0506)
## Iteration: 50 (-452517.2714, 0.0502)
## Group probs = (0.7404, 0.1786, 0.0810)
##
## Outer iteration: 30
## Iteration: 1 (-453602.8464, 0.1505)
## Iteration: 10 (-453597.4819, 0.0500)
## Iteration: 20 (-453591.7479, 0.0500)
## Iteration: 30 (-453586.1216, 0.0498)
## Iteration: 40 (-453580.5836, 0.0496)
## Iteration: 50 (-453575.1258, 0.0493)
## Group probs = (0.7395, 0.1791, 0.0815)
##
## Outer iteration: 31
## Iteration: 1 (-452754.5785, 0.1218)
## Iteration: 10 (-452749.5402, 0.0503)
## Iteration: 20 (-452744.1396, 0.0494)
## Iteration: 30 (-452738.8352, 0.0489)
## Iteration: 40 (-452733.6074, 0.0486)
## Iteration: 50 (-452728.4491, 0.0482)
## Group probs = (0.7405, 0.1783, 0.0812)
##
## Outer iteration: 32
## Iteration: 1 (-453601.5194, 0.0728)
## Iteration: 10 (-453596.5155, 0.0483)
## Iteration: 20 (-453591.1014, 0.0483)
## Iteration: 30 (-453585.7697, 0.0481)
## Iteration: 40 (-453580.5115, 0.0478)
## Iteration: 50 (-453575.3230, 0.0475)
## Group probs = (0.7400, 0.1782, 0.0818)
##
## Outer iteration: 33
## Iteration: 1 (-453054.8393, 0.2156)
## Iteration: 10 (-453049.6363, 0.0481)
## Iteration: 20 (-453044.0187, 0.0478)
## Iteration: 30 (-453038.5030, 0.0476)
## Iteration: 40 (-453033.0756, 0.0474)
## Iteration: 50 (-453027.7296, 0.0471)
## Group probs = (0.7380, 0.1792, 0.0828)
##
## Outer iteration: 34
## Iteration: 1 (-451225.1671, 0.0491)
## Iteration: 10 (-451219.8871, 0.0490)
## Iteration: 20 (-451214.3700, 0.0478)
## Iteration: 30 (-451208.9814, 0.0473)
## Iteration: 40 (-451203.6851, 0.0469)
## Iteration: 50 (-451198.4686, 0.0465)
## Group probs = (0.7398, 0.1780, 0.0822)
```

```
##
## Outer iteration: 35
## Iteration: 1 (-452821.5781, 0.0617)
## Iteration: 10 (-452816.3725, 0.0462)
## Iteration: 20 (-452810.8300, 0.0464)
## Iteration: 30 (-452805.3942, 0.0463)
## Iteration: 40 (-452800.0440, 0.0462)
## Iteration: 50 (-452794.7719, 0.0459)
## Group probs = (0.7378, 0.1791, 0.0832)
##
## Outer iteration: 36
## Iteration: 1 (-450884.6628, 0.1346)
## Iteration: 10 (-450879.4236, 0.0481)
## Iteration: 20 (-450874.0458, 0.0467)
## Iteration: 30 (-450868.8214, 0.0461)
## Iteration: 40 (-450863.6943, 0.0456)
## Iteration: 50 (-450858.6456, 0.0453)
## Group probs = (0.7400, 0.1776, 0.0825)
##
## Outer iteration: 37
## Iteration: 1 (-452765.1670, 0.0494)
## Iteration: 10 (-452760.0020, 0.0450)
## Iteration: 20 (-452754.5831, 0.0452)
## Iteration: 30 (-452749.2719, 0.0452)
## Iteration: 40 (-452744.0419, 0.0450)
## Iteration: 50 (-452738.8850, 0.0448)
## Group probs = (0.7384, 0.1782, 0.0834)
##
## Outer iteration: 38
## Iteration: 1 (-451344.4701, 0.2331)
## Iteration: 10 (-451339.2928, 0.0459)
## Iteration: 20 (-451333.7070, 0.0454)
## Iteration: 30 (-451328.2150, 0.0451)
## Iteration: 40 (-451322.8069, 0.0449)
## Iteration: 50 (-451317.4773, 0.0446)
## Group probs = (0.7370, 0.1789, 0.0842)
##
## Outer iteration: 39
## Iteration: 1 (-449980.1312, 0.0541)
## Iteration: 10 (-449974.9263, 0.0459)
## Iteration: 20 (-449969.3660, 0.0452)
## Iteration: 30 (-449963.9045, 0.0448)
## Iteration: 40 (-449958.5258, 0.0445)
## Iteration: 50 (-449953.2239, 0.0442)
## Group probs = (0.7356, 0.1793, 0.0850)
##
## Outer iteration: 40
## Iteration: 1 (-448667.3091, 0.2059)
## Iteration: 10 (-448661.8926, 0.0453)
## Iteration: 20 (-448656.0541, 0.0449)
## Iteration: 30 (-448650.3232, 0.0446)
## Iteration: 40 (-448644.6861, 0.0444)
## Iteration: 50 (-448639.1353, 0.0441)
## Group probs = (0.7382, 0.1777, 0.0841)
```

```

##
## CCES_2015
## Outer iteration: 1
## Iteration: 1 (-101297.9390,   Inf)
## Iteration: 10 (-91659.2289, 2.3024)
## Iteration: 20 (-90902.8479, 0.9528)
## Iteration: 30 (-90655.3885, 0.5753)
## Iteration: 40 (-90531.1473, 0.4076)
## Iteration: 50 (-90454.7072, 0.3154)
## Group probs = (0.6451, 0.3082, 0.0467)
##
## Outer iteration: 2
## Iteration: 1 (-91594.3170, 0.3320)
## Iteration: 10 (-91558.4180, 0.2364)
## Iteration: 20 (-91529.6290, 0.1992)
## Iteration: 30 (-91507.3622, 0.1725)
## Iteration: 40 (-91489.5040, 0.1523)
## Iteration: 50 (-91474.8039, 0.1363)
## Group probs = (0.6462, 0.3067, 0.0471)
##
## Outer iteration: 3
## Iteration: 1 (-91591.3726, 0.2896)
## Iteration: 10 (-91578.7900, 0.1274)
## Iteration: 20 (-91566.8667, 0.1167)
## Iteration: 30 (-91556.5588, 0.1076)
## Iteration: 40 (-91547.5329, 0.0998)
## Iteration: 50 (-91539.5474, 0.0931)
## Group probs = (0.6461, 0.3066, 0.0473)
##
## Outer iteration: 4
## Iteration: 1 (-91487.0072, 0.0922)
## Iteration: 10 (-91479.8508, 0.0903)
## Iteration: 20 (-91472.6917, 0.0851)
## Iteration: 30 (-91466.2175, 0.0804)
## Iteration: 40 (-91460.3242, 0.0763)
## Iteration: 50 (-91454.9295, 0.0726)
## Group probs = (0.6467, 0.3060, 0.0473)
##
## Outer iteration: 5
## Iteration: 1 (-91573.1071, 0.0908)
## Iteration: 10 (-91568.2521, 0.0707)
## Iteration: 20 (-91563.2750, 0.0679)
## Iteration: 30 (-91558.6609, 0.0651)
## Iteration: 40 (-91554.3662, 0.0625)
## Iteration: 50 (-91550.3547, 0.0602)
## Group probs = (0.6458, 0.3066, 0.0476)
##
## Outer iteration: 6
## Iteration: 1 (-91344.1434, 0.0944)
## Iteration: 10 (-91340.4301, 0.0599)
## Iteration: 20 (-91336.5980, 0.0575)
## Iteration: 30 (-91332.9974, 0.0555)
## Iteration: 40 (-91329.5997, 0.0537)
## Iteration: 50 (-91326.3848, 0.0521)

```

```

## Group probs = (0.6452, 0.3070, 0.0478)
##
## Outer iteration: 7
## Iteration: 1 (-91164.7193, 0.0667)
## Iteration: 10 (-91161.6850, 0.0523)
## Iteration: 20 (-91158.5410, 0.0505)
## Iteration: 30 (-91155.5610, 0.0490)
## Iteration: 40 (-91152.7237, 0.0477)
## Iteration: 50 (-91150.0160, 0.0465)
## Group probs = (0.6439, 0.3084, 0.0478)
##
## Outer iteration: 8
## Iteration: 1 (-90946.3140, 0.2413)
## Iteration: 10 (-90943.7642, 0.0464)
## Iteration: 20 (-90941.1604, 0.0450)
## Iteration: 30 (-90938.6865, 0.0439)
## Iteration: 40 (-90936.3188, 0.0429)
## Iteration: 50 (-90934.0459, 0.0420)
## Group probs = (0.6451, 0.3065, 0.0484)
##
## Outer iteration: 9
## Iteration: 1 (-91061.7194, 0.3512)
## Iteration: 10 (-91059.3487, 0.0441)
## Iteration: 20 (-91056.9722, 0.0425)
## Iteration: 30 (-91054.7127, 0.0413)
## Iteration: 40 (-91052.5432, 0.0403)
## Iteration: 50 (-91050.4518, 0.0393)
## Group probs = (0.6440, 0.3080, 0.0480)
##
## Outer iteration: 10
## Iteration: 1 (-90906.6343, 0.2911)
## Iteration: 10 (-90904.6199, 0.0383)
## Iteration: 20 (-90902.5949, 0.0374)
## Iteration: 30 (-90900.6627, 0.0368)
## Iteration: 40 (-90898.7986, 0.0363)
## Iteration: 50 (-90896.9937, 0.0358)
## Group probs = (0.6446, 0.3074, 0.0480)
##
## Outer iteration: 11
## Iteration: 1 (-91011.9889, 0.0734)
## Iteration: 10 (-91010.3350, 0.0356)
## Iteration: 20 (-91008.5674, 0.0353)
## Iteration: 30 (-91006.8507, 0.0348)
## Iteration: 40 (-91005.1812, 0.0343)
## Iteration: 50 (-91003.5561, 0.0338)
## Group probs = (0.6444, 0.3076, 0.0479)
##
## Outer iteration: 12
## Iteration: 1 (-90965.2626, 0.0590)
## Iteration: 10 (-90963.7812, 0.0333)
## Iteration: 20 (-90962.1858, 0.0329)
## Iteration: 30 (-90960.6332, 0.0325)
## Iteration: 40 (-90959.1198, 0.0321)
## Iteration: 50 (-90957.6431, 0.0317)

```

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## Group probs = (0.6430, 0.3088, 0.0482)
##
## Outer iteration: 13
## Iteration: 1 (-90685.0588, 0.1497)
## Iteration: 10 (-90683.6507, 0.0324)
## Iteration: 20 (-90682.1995, 0.0314)
## Iteration: 30 (-90680.7952, 0.0309)
## Iteration: 40 (-90679.4266, 0.0305)
## Iteration: 50 (-90678.0896, 0.0301)
## Group probs = (0.6437, 0.3081, 0.0482)
##
## Outer iteration: 14
## Iteration: 1 (-90797.4405, 0.0772)
## Iteration: 10 (-90796.2000, 0.0301)
## Iteration: 20 (-90794.8647, 0.0299)
## Iteration: 30 (-90793.5591, 0.0295)
## Iteration: 40 (-90792.2807, 0.0292)
## Iteration: 50 (-90791.0283, 0.0289)
## Group probs = (0.6438, 0.3078, 0.0484)
##
## Outer iteration: 15
## Iteration: 1 (-90778.7908, 0.0795)
## Iteration: 10 (-90777.6412, 0.0291)
## Iteration: 20 (-90776.3977, 0.0287)
## Iteration: 30 (-90775.1807, 0.0283)
## Iteration: 40 (-90773.9880, 0.0279)
## Iteration: 50 (-90772.8181, 0.0276)
## Group probs = (0.6432, 0.3084, 0.0485)
##
## Outer iteration: 16
## Iteration: 1 (-90645.9436, 0.0798)
## Iteration: 10 (-90644.8855, 0.0276)
## Iteration: 20 (-90643.7512, 0.0271)
## Iteration: 30 (-90642.6416, 0.0267)
## Iteration: 40 (-90641.5527, 0.0264)
## Iteration: 50 (-90640.4831, 0.0262)
## Group probs = (0.6429, 0.3086, 0.0486)
##
## Outer iteration: 17
## Iteration: 1 (-90581.0560, 0.0351)
## Iteration: 10 (-90580.0963, 0.0262)
## Iteration: 20 (-90579.0504, 0.0258)
## Iteration: 30 (-90578.0223, 0.0256)
## Iteration: 40 (-90577.0110, 0.0253)
## Iteration: 50 (-90576.0160, 0.0251)
## Group probs = (0.6421, 0.3091, 0.0488)
##
## Outer iteration: 18
## Iteration: 1 (-90455.2799, 0.0996)
## Iteration: 10 (-90454.3711, 0.0253)
## Iteration: 20 (-90453.3955, 0.0249)
## Iteration: 30 (-90452.4383, 0.0246)
## Iteration: 40 (-90451.4968, 0.0244)
## Iteration: 50 (-90450.5700, 0.0242)

```

```

## Group probs = (0.6424, 0.3087, 0.0488)
##
## Outer iteration: 19
## Iteration: 1 (-90482.7464, 0.0486)
## Iteration: 10 (-90481.9040, 0.0242)
## Iteration: 20 (-90480.9854, 0.0240)
## Iteration: 30 (-90480.0810, 0.0238)
## Iteration: 40 (-90479.1899, 0.0236)
## Iteration: 50 (-90478.3117, 0.0234)
## Group probs = (0.6426, 0.3082, 0.0492)
##
## Outer iteration: 20
## Iteration: 1 (-90464.9907, 0.1275)
## Iteration: 10 (-90464.1723, 0.0241)
## Iteration: 20 (-90463.2966, 0.0235)
## Iteration: 30 (-90462.4377, 0.0232)
## Iteration: 40 (-90461.5927, 0.0229)
## Iteration: 50 (-90460.7603, 0.0226)
## Group probs = (0.6410, 0.3097, 0.0493)
##
## Outer iteration: 21
## Iteration: 1 (-90186.7954, 0.2207)
## Iteration: 10 (-90185.9620, 0.0230)
## Iteration: 20 (-90185.1402, 0.0223)
## Iteration: 30 (-90184.3405, 0.0220)
## Iteration: 40 (-90183.5547, 0.0218)
## Iteration: 50 (-90182.7802, 0.0217)
## Group probs = (0.6409, 0.3103, 0.0488)
##
## Outer iteration: 22
## Iteration: 1 (-90201.3113, 0.1532)
## Iteration: 10 (-90200.5344, 0.0210)
## Iteration: 20 (-90199.7472, 0.0208)
## Iteration: 30 (-90198.9931, 0.0207)
## Iteration: 40 (-90198.2588, 0.0207)
## Iteration: 50 (-90197.5387, 0.0206)
## Group probs = (0.6415, 0.3100, 0.0485)
##
## Outer iteration: 23
## Iteration: 1 (-90315.7802, 0.0312)
## Iteration: 10 (-90315.1107, 0.0201)
## Iteration: 20 (-90314.3945, 0.0203)
## Iteration: 30 (-90313.6916, 0.0203)
## Iteration: 40 (-90312.9995, 0.0202)
## Iteration: 50 (-90312.3170, 0.0201)
## Group probs = (0.6412, 0.3101, 0.0488)
##
## Outer iteration: 24
## Iteration: 1 (-90232.4269, 0.0307)
## Iteration: 10 (-90231.8144, 0.0206)
## Iteration: 20 (-90231.1448, 0.0203)
## Iteration: 30 (-90230.4835, 0.0201)
## Iteration: 40 (-90229.8299, 0.0199)
## Iteration: 50 (-90229.1836, 0.0197)

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```
## Group probs = (0.6401, 0.3110, 0.0490)
##
## Outer iteration: 25
## Iteration: 1 (-90029.4459, 0.1109)
## Iteration: 10 (-90028.8232, 0.0201)
## Iteration: 20 (-90028.1836, 0.0195)
## Iteration: 30 (-90027.5596, 0.0193)
## Iteration: 40 (-90026.9456, 0.0191)
## Iteration: 50 (-90026.3395, 0.0190)
## Group probs = (0.6405, 0.3107, 0.0488)
##
## Outer iteration: 26
## Iteration: 1 (-90119.5521, 0.0210)
## Iteration: 10 (-90119.0023, 0.0186)
## Iteration: 20 (-90118.4034, 0.0187)
## Iteration: 30 (-90117.8118, 0.0187)
## Iteration: 40 (-90117.2267, 0.0186)
## Iteration: 50 (-90116.6478, 0.0185)
## Group probs = (0.6417, 0.3094, 0.0489)
##
## Outer iteration: 27
## Iteration: 1 (-90299.8511, 0.2095)
## Iteration: 10 (-90299.2033, 0.0192)
## Iteration: 20 (-90298.5839, 0.0189)
## Iteration: 30 (-90297.9906, 0.0187)
## Iteration: 40 (-90297.4110, 0.0184)
## Iteration: 50 (-90296.8405, 0.0183)
## Group probs = (0.6415, 0.3092, 0.0492)
##
## Outer iteration: 28
## Iteration: 1 (-90223.0078, 0.0694)
## Iteration: 10 (-90222.4533, 0.0192)
## Iteration: 20 (-90221.8671, 0.0186)
## Iteration: 30 (-90221.2968, 0.0183)
## Iteration: 40 (-90220.7371, 0.0180)
## Iteration: 50 (-90220.1856, 0.0178)
## Group probs = (0.6425, 0.3083, 0.0492)
##
## Outer iteration: 29
## Iteration: 1 (-90402.5122, 0.1128)
## Iteration: 10 (-90401.9447, 0.0181)
## Iteration: 20 (-90401.3712, 0.0179)
## Iteration: 30 (-90400.8164, 0.0177)
## Iteration: 40 (-90400.2726, 0.0175)
## Iteration: 50 (-90399.7368, 0.0173)
## Group probs = (0.6428, 0.3080, 0.0492)
##
## Outer iteration: 30
## Iteration: 1 (-90434.7390, 0.0629)
## Iteration: 10 (-90434.2446, 0.0173)
## Iteration: 20 (-90433.7103, 0.0172)
## Iteration: 30 (-90433.1842, 0.0170)
## Iteration: 40 (-90432.6646, 0.0169)
## Iteration: 50 (-90432.1508, 0.0168)
```

```
## Group probs = (0.6438, 0.3070, 0.0491)
##
## Outer iteration: 31
## Iteration: 1 (-90614.4885, 0.1251)
## Iteration: 10 (-90613.9353, 0.0173)
## Iteration: 20 (-90613.3867, 0.0170)
## Iteration: 30 (-90612.8599, 0.0168)
## Iteration: 40 (-90612.3453, 0.0167)
## Iteration: 50 (-90611.8390, 0.0165)
## Group probs = (0.6441, 0.3068, 0.0491)
##
## Outer iteration: 32
## Iteration: 1 (-90655.1345, 0.0334)
## Iteration: 10 (-90654.6719, 0.0164)
## Iteration: 20 (-90654.1705, 0.0163)
## Iteration: 30 (-90653.6758, 0.0162)
## Iteration: 40 (-90653.1866, 0.0161)
## Iteration: 50 (-90652.7024, 0.0160)
## Group probs = (0.6430, 0.3080, 0.0490)
##
## Outer iteration: 33
## Iteration: 1 (-90486.3709, 0.1842)
## Iteration: 10 (-90485.8683, 0.0160)
## Iteration: 20 (-90485.3808, 0.0156)
## Iteration: 30 (-90484.9120, 0.0155)
## Iteration: 40 (-90484.4531, 0.0154)
## Iteration: 50 (-90484.0007, 0.0154)
## Group probs = (0.6433, 0.3078, 0.0489)
##
## Outer iteration: 34
## Iteration: 1 (-90565.5626, 0.0186)
## Iteration: 10 (-90565.1480, 0.0151)
## Iteration: 20 (-90564.6963, 0.0153)
## Iteration: 30 (-90564.2495, 0.0153)
## Iteration: 40 (-90563.8068, 0.0153)
## Iteration: 50 (-90563.3679, 0.0153)
## Group probs = (0.6417, 0.3093, 0.0489)
##
## Outer iteration: 35
## Iteration: 1 (-90282.3908, 0.2212)
## Iteration: 10 (-90281.8468, 0.0161)
## Iteration: 20 (-90281.3706, 0.0153)
## Iteration: 30 (-90280.9277, 0.0150)
## Iteration: 40 (-90280.5011, 0.0149)
## Iteration: 50 (-90280.0839, 0.0148)
## Group probs = (0.6423, 0.3088, 0.0489)
##
## Outer iteration: 36
## Iteration: 1 (-90358.7966, 0.0946)
## Iteration: 10 (-90358.4119, 0.0149)
## Iteration: 20 (-90358.0006, 0.0149)
## Iteration: 30 (-90357.5938, 0.0148)
## Iteration: 40 (-90357.1905, 0.0147)
## Iteration: 50 (-90356.7903, 0.0147)
```

```

## Group probs = (0.6426, 0.3084, 0.0491)
##
## Outer iteration: 37
## Iteration: 1 (-90374.3335, 0.0985)
## Iteration: 10 (-90373.9431, 0.0153)
## Iteration: 20 (-90373.5303, 0.0150)
## Iteration: 30 (-90373.1270, 0.0148)
## Iteration: 40 (-90372.7297, 0.0147)
## Iteration: 50 (-90372.3369, 0.0145)
## Group probs = (0.6434, 0.3077, 0.0488)
##
## Outer iteration: 38
## Iteration: 1 (-90548.5645, 0.0593)
## Iteration: 10 (-90548.1820, 0.0142)
## Iteration: 20 (-90547.7852, 0.0143)
## Iteration: 30 (-90547.3950, 0.0143)
## Iteration: 40 (-90547.0093, 0.0142)
## Iteration: 50 (-90546.6271, 0.0142)
## Group probs = (0.6434, 0.3077, 0.0489)
##
## Outer iteration: 39
## Iteration: 1 (-90555.0492, 0.0216)
## Iteration: 10 (-90554.7016, 0.0141)
## Iteration: 20 (-90554.3230, 0.0141)
## Iteration: 30 (-90553.9482, 0.0140)
## Iteration: 40 (-90553.5765, 0.0139)
## Iteration: 50 (-90553.2076, 0.0139)
## Group probs = (0.6433, 0.3079, 0.0488)
##
## Outer iteration: 40
## Iteration: 1 (-90537.6561, 0.0484)
## Iteration: 10 (-90537.3110, 0.0137)
## Iteration: 20 (-90536.9419, 0.0136)
## Iteration: 30 (-90536.5795, 0.0135)
## Iteration: 40 (-90536.2216, 0.0135)
## Iteration: 50 (-90535.8671, 0.0134)
## Group probs = (0.6436, 0.3072, 0.0492)
##
## Outer iteration: 1
## Iteration: 1 (-101776.7072, Inf)
## Iteration: 10 (-91985.4520, 2.3269)
## Iteration: 20 (-91209.6462, 0.9662)
## Iteration: 30 (-90955.1489, 0.5847)
## Iteration: 40 (-90827.1555, 0.4150)
## Iteration: 50 (-90748.3283, 0.3215)
## Group probs = (0.6468, 0.3061, 0.0471)
##
## Outer iteration: 2
## Iteration: 1 (-91517.5173, 0.3139)
## Iteration: 10 (-91479.2800, 0.2458)
## Iteration: 20 (-91447.9319, 0.2074)
## Iteration: 30 (-91423.5947, 0.1798)
## Iteration: 40 (-91404.0260, 0.1588)
## Iteration: 50 (-91387.8795, 0.1423)

```

```
## Group probs = (0.6471, 0.3056, 0.0474)
##
## Outer iteration: 3
## Iteration: 1 (-91375.3998, 0.1854)
## Iteration: 10 (-91361.8735, 0.1331)
## Iteration: 20 (-91348.9953, 0.1218)
## Iteration: 30 (-91337.8482, 0.1123)
## Iteration: 40 (-91328.0788, 0.1041)
## Iteration: 50 (-91319.4283, 0.0972)
## Group probs = (0.6468, 0.3055, 0.0477)
##
## Outer iteration: 4
## Iteration: 1 (-91229.6048, 0.0964)
## Iteration: 10 (-91221.9852, 0.0942)
## Iteration: 20 (-91214.3600, 0.0885)
## Iteration: 30 (-91207.4608, 0.0836)
## Iteration: 40 (-91201.1763, 0.0792)
## Iteration: 50 (-91195.4191, 0.0753)
## Group probs = (0.6461, 0.3059, 0.0480)
##
## Outer iteration: 5
## Iteration: 1 (-91050.0926, 0.1074)
## Iteration: 10 (-91044.9047, 0.0742)
## Iteration: 20 (-91039.6100, 0.0707)
## Iteration: 30 (-91034.7074, 0.0676)
## Iteration: 40 (-91030.1451, 0.0649)
## Iteration: 50 (-91025.8836, 0.0624)
## Group probs = (0.6451, 0.3064, 0.0485)
##
## Outer iteration: 6
## Iteration: 1 (-90816.6837, 0.0847)
## Iteration: 10 (-90812.8110, 0.0621)
## Iteration: 20 (-90808.8049, 0.0595)
## Iteration: 30 (-90805.0392, 0.0573)
## Iteration: 40 (-90801.4850, 0.0554)
## Iteration: 50 (-90798.1211, 0.0537)
## Group probs = (0.6462, 0.3057, 0.0481)
##
## Outer iteration: 7
## Iteration: 1 (-91006.6569, 0.0714)
## Iteration: 10 (-91003.5626, 0.0522)
## Iteration: 20 (-91000.3258, 0.0511)
## Iteration: 30 (-90997.2494, 0.0499)
## Iteration: 40 (-90994.3178, 0.0486)
## Iteration: 50 (-90991.5185, 0.0474)
## Group probs = (0.6450, 0.3067, 0.0483)
##
## Outer iteration: 8
## Iteration: 1 (-90748.7835, 0.1219)
## Iteration: 10 (-90746.2160, 0.0476)
## Iteration: 20 (-90743.5458, 0.0459)
## Iteration: 30 (-90740.9968, 0.0447)
## Iteration: 40 (-90738.5521, 0.0437)
## Iteration: 50 (-90736.2025, 0.0427)
```

```
## Group probs = (0.6444, 0.3068, 0.0488)
##
## Outer iteration: 9
## Iteration: 1 (-90576.8389, 0.0502)
## Iteration: 10 (-90574.6830, 0.0435)
## Iteration: 20 (-90572.3881, 0.0421)
## Iteration: 30 (-90570.1778, 0.0411)
## Iteration: 40 (-90568.0448, 0.0401)
## Iteration: 50 (-90565.9836, 0.0393)
## Group probs = (0.6439, 0.3069, 0.0492)
##
## Outer iteration: 10
## Iteration: 1 (-90447.8421, 0.0389)
## Iteration: 10 (-90445.9787, 0.0395)
## Iteration: 20 (-90443.9836, 0.0384)
## Iteration: 30 (-90442.0533, 0.0376)
## Iteration: 40 (-90440.1825, 0.0368)
## Iteration: 50 (-90438.3673, 0.0362)
## Group probs = (0.6439, 0.3072, 0.0489)
##
## Outer iteration: 11
## Iteration: 1 (-90463.4044, 0.1198)
## Iteration: 10 (-90461.7514, 0.0356)
## Iteration: 20 (-90459.9757, 0.0352)
## Iteration: 30 (-90458.2507, 0.0348)
## Iteration: 40 (-90456.5730, 0.0343)
## Iteration: 50 (-90454.9399, 0.0338)
## Group probs = (0.6440, 0.3078, 0.0482)
##
## Outer iteration: 12
## Iteration: 1 (-90559.8496, 0.1637)
## Iteration: 10 (-90558.2710, 0.0324)
## Iteration: 20 (-90556.6534, 0.0322)
## Iteration: 30 (-90555.1078, 0.0319)
## Iteration: 40 (-90553.6143, 0.0316)
## Iteration: 50 (-90552.1641, 0.0313)
## Group probs = (0.6433, 0.3077, 0.0490)
##
## Outer iteration: 13
## Iteration: 1 (-90316.0274, 0.1091)
## Iteration: 10 (-90314.6617, 0.0330)
## Iteration: 20 (-90313.2139, 0.0319)
## Iteration: 30 (-90311.8058, 0.0312)
## Iteration: 40 (-90310.4320, 0.0307)
## Iteration: 50 (-90309.0895, 0.0302)
## Group probs = (0.6429, 0.3083, 0.0489)
##
## Outer iteration: 14
## Iteration: 1 (-90286.9580, 0.1302)
## Iteration: 10 (-90285.7513, 0.0296)
## Iteration: 20 (-90284.4568, 0.0293)
## Iteration: 30 (-90283.1935, 0.0290)
## Iteration: 40 (-90281.9576, 0.0286)
## Iteration: 50 (-90280.7472, 0.0283)
```

```

## Group probs = (0.6424, 0.3090, 0.0486)
##
## Outer iteration: 15
## Iteration: 1 (-90224.1629, 0.1523)
## Iteration: 10 (-90222.9682, 0.0279)
## Iteration: 20 (-90221.7544, 0.0273)
## Iteration: 30 (-90220.5942, 0.0270)
## Iteration: 40 (-90219.4688, 0.0268)
## Iteration: 50 (-90218.3706, 0.0266)
## Group probs = (0.6420, 0.3093, 0.0487)
##
## Outer iteration: 16
## Iteration: 1 (-90130.3753, 0.0429)
## Iteration: 10 (-90129.3877, 0.0267)
## Iteration: 20 (-90128.3195, 0.0263)
## Iteration: 30 (-90127.2742, 0.0260)
## Iteration: 40 (-90126.2491, 0.0258)
## Iteration: 50 (-90125.2426, 0.0255)
## Group probs = (0.6424, 0.3088, 0.0488)
##
## Outer iteration: 17
## Iteration: 1 (-90219.2082, 0.0464)
## Iteration: 10 (-90218.2620, 0.0257)
## Iteration: 20 (-90217.2514, 0.0255)
## Iteration: 30 (-90216.2630, 0.0253)
## Iteration: 40 (-90215.2926, 0.0250)
## Iteration: 50 (-90214.3385, 0.0248)
## Group probs = (0.6419, 0.3094, 0.0487)
##
## Outer iteration: 18
## Iteration: 1 (-90128.2038, 0.1083)
## Iteration: 10 (-90127.3107, 0.0245)
## Iteration: 20 (-90126.3688, 0.0241)
## Iteration: 30 (-90125.4525, 0.0239)
## Iteration: 40 (-90124.5547, 0.0237)
## Iteration: 50 (-90123.6726, 0.0235)
## Group probs = (0.6421, 0.3089, 0.0490)
##
## Outer iteration: 19
## Iteration: 1 (-90102.4219, 0.1246)
## Iteration: 10 (-90101.5986, 0.0243)
## Iteration: 20 (-90100.7138, 0.0238)
## Iteration: 30 (-90099.8463, 0.0235)
## Iteration: 40 (-90098.9932, 0.0232)
## Iteration: 50 (-90098.1533, 0.0229)
## Group probs = (0.6419, 0.3092, 0.0489)
##
## Outer iteration: 20
## Iteration: 1 (-90091.0712, 0.0936)
## Iteration: 10 (-90090.3261, 0.0225)
## Iteration: 20 (-90089.5149, 0.0224)
## Iteration: 30 (-90088.7156, 0.0222)
## Iteration: 40 (-90087.9274, 0.0220)
## Iteration: 50 (-90087.1500, 0.0219)

```

```

## Group probs = (0.6415, 0.3093, 0.0491)
##
## Outer iteration: 21
## Iteration: 1 (-89992.6552, 0.0286)
## Iteration: 10 (-89991.9486, 0.0222)
## Iteration: 20 (-89991.1807, 0.0218)
## Iteration: 30 (-89990.4242, 0.0215)
## Iteration: 40 (-89989.6780, 0.0213)
## Iteration: 50 (-89988.9415, 0.0211)
## Group probs = (0.6403, 0.3103, 0.0494)
##
## Outer iteration: 22
## Iteration: 1 (-89741.9013, 0.1002)
## Iteration: 10 (-89741.1594, 0.0217)
## Iteration: 20 (-89740.4232, 0.0209)
## Iteration: 30 (-89739.7154, 0.0205)
## Iteration: 40 (-89739.0236, 0.0203)
## Iteration: 50 (-89738.3433, 0.0201)
## Group probs = (0.6404, 0.3102, 0.0494)
##
## Outer iteration: 23
## Iteration: 1 (-89754.4826, 0.0231)
## Iteration: 10 (-89753.8625, 0.0203)
## Iteration: 20 (-89753.1876, 0.0201)
## Iteration: 30 (-89752.5223, 0.0200)
## Iteration: 40 (-89751.8655, 0.0198)
## Iteration: 50 (-89751.2165, 0.0197)
## Group probs = (0.6417, 0.3087, 0.0496)
##
## Outer iteration: 24
## Iteration: 1 (-89958.1738, 0.2102)
## Iteration: 10 (-89957.4021, 0.0211)
## Iteration: 20 (-89956.6819, 0.0205)
## Iteration: 30 (-89956.0018, 0.0201)
## Iteration: 40 (-89955.3429, 0.0198)
## Iteration: 50 (-89954.6979, 0.0195)
## Group probs = (0.6427, 0.3082, 0.0491)
##
## Outer iteration: 25
## Iteration: 1 (-90145.3181, 0.0329)
## Iteration: 10 (-90144.7179, 0.0185)
## Iteration: 20 (-90144.0888, 0.0187)
## Iteration: 30 (-90143.4694, 0.0187)
## Iteration: 40 (-90142.8575, 0.0186)
## Iteration: 50 (-90142.2525, 0.0185)
## Group probs = (0.6433, 0.3074, 0.0493)
##
## Outer iteration: 26
## Iteration: 1 (-90222.0369, 0.1434)
## Iteration: 10 (-90221.4079, 0.0195)
## Iteration: 20 (-90220.7679, 0.0190)
## Iteration: 30 (-90220.1515, 0.0187)
## Iteration: 40 (-90219.5491, 0.0185)
## Iteration: 50 (-90218.9568, 0.0183)

```

```
## Group probs = (0.6430, 0.3079, 0.0491)
##
## Outer iteration: 27
## Iteration: 1 (-90185.4301, 0.0902)
## Iteration: 10 (-90184.9006, 0.0178)
## Iteration: 20 (-90184.3260, 0.0177)
## Iteration: 30 (-90183.7585, 0.0176)
## Iteration: 40 (-90183.1971, 0.0175)
## Iteration: 50 (-90182.6414, 0.0175)
## Group probs = (0.6419, 0.3090, 0.0491)
##
## Outer iteration: 28
## Iteration: 1 (-90018.1233, 0.1645)
## Iteration: 10 (-90017.5606, 0.0177)
## Iteration: 20 (-90016.9989, 0.0173)
## Iteration: 30 (-90016.4557, 0.0171)
## Iteration: 40 (-90015.9230, 0.0170)
## Iteration: 50 (-90015.3979, 0.0170)
## Group probs = (0.6408, 0.3100, 0.0492)
##
## Outer iteration: 29
## Iteration: 1 (-89812.5123, 0.1317)
## Iteration: 10 (-89811.9457, 0.0176)
## Iteration: 20 (-89811.3985, 0.0170)
## Iteration: 30 (-89810.8781, 0.0167)
## Iteration: 40 (-89810.3722, 0.0166)
## Iteration: 50 (-89809.8757, 0.0165)
## Group probs = (0.6411, 0.3098, 0.0491)
##
## Outer iteration: 30
## Iteration: 1 (-89877.8479, 0.0161)
## Iteration: 10 (-89877.3924, 0.0165)
## Iteration: 20 (-89876.9010, 0.0165)
## Iteration: 30 (-89876.4159, 0.0165)
## Iteration: 40 (-89875.9359, 0.0164)
## Iteration: 50 (-89875.4604, 0.0163)
## Group probs = (0.6423, 0.3087, 0.0490)
##
## Outer iteration: 31
## Iteration: 1 (-90087.9487, 0.1245)
## Iteration: 10 (-90087.4705, 0.0160)
## Iteration: 20 (-90086.9911, 0.0161)
## Iteration: 30 (-90086.5212, 0.0161)
## Iteration: 40 (-90086.0572, 0.0160)
## Iteration: 50 (-90085.5979, 0.0159)
## Group probs = (0.6417, 0.3089, 0.0495)
##
## Outer iteration: 32
## Iteration: 1 (-89938.7404, 0.0369)
## Iteration: 10 (-89938.3144, 0.0166)
## Iteration: 20 (-89937.8583, 0.0161)
## Iteration: 30 (-89937.4082, 0.0159)
## Iteration: 40 (-89936.9628, 0.0157)
## Iteration: 50 (-89936.5215, 0.0156)
```

```
## Group probs = (0.6419, 0.3087, 0.0494)
##
## Outer iteration: 33
## Iteration: 1 (-89996.7729, 0.0200)
## Iteration: 10 (-89996.3733, 0.0153)
## Iteration: 20 (-89995.9353, 0.0153)
## Iteration: 30 (-89995.5014, 0.0153)
## Iteration: 40 (-89995.0712, 0.0152)
## Iteration: 50 (-89994.6445, 0.0151)
## Group probs = (0.6422, 0.3085, 0.0493)
##
## Outer iteration: 34
## Iteration: 1 (-90032.1473, 0.0246)
## Iteration: 10 (-90031.7605, 0.0150)
## Iteration: 20 (-90031.3390, 0.0149)
## Iteration: 30 (-90030.9215, 0.0149)
## Iteration: 40 (-90030.5076, 0.0148)
## Iteration: 50 (-90030.0970, 0.0148)
## Group probs = (0.6422, 0.3082, 0.0495)
##
## Outer iteration: 35
## Iteration: 1 (-90007.2044, 0.0815)
## Iteration: 10 (-90006.8194, 0.0153)
## Iteration: 20 (-90006.4048, 0.0150)
## Iteration: 30 (-90005.9965, 0.0149)
## Iteration: 40 (-90005.5927, 0.0147)
## Iteration: 50 (-90005.1928, 0.0146)
## Group probs = (0.6423, 0.3085, 0.0492)
##
## Outer iteration: 36
## Iteration: 1 (-90050.1667, 0.0800)
## Iteration: 10 (-90049.8028, 0.0140)
## Iteration: 20 (-90049.4079, 0.0142)
## Iteration: 30 (-90049.0168, 0.0142)
## Iteration: 40 (-90048.6289, 0.0142)
## Iteration: 50 (-90048.2440, 0.0141)
## Group probs = (0.6432, 0.3073, 0.0495)
##
## Outer iteration: 37
## Iteration: 1 (-90169.5813, 0.2035)
## Iteration: 10 (-90169.1461, 0.0151)
## Iteration: 20 (-90168.7306, 0.0148)
## Iteration: 30 (-90168.3321, 0.0145)
## Iteration: 40 (-90167.9428, 0.0143)
## Iteration: 50 (-90167.5595, 0.0142)
## Group probs = (0.6427, 0.3081, 0.0491)
##
## Outer iteration: 38
## Iteration: 1 (-90126.4370, 0.1660)
## Iteration: 10 (-90126.0655, 0.0135)
## Iteration: 20 (-90125.6862, 0.0134)
## Iteration: 30 (-90125.3171, 0.0134)
## Iteration: 40 (-90124.9537, 0.0134)
## Iteration: 50 (-90124.5946, 0.0134)
```

```

## Group probs = (0.6420, 0.3086, 0.0494)
##
## Outer iteration: 39
## Iteration: 1 (-89982.9859, 0.0434)
## Iteration: 10 (-89982.6506, 0.0138)
## Iteration: 20 (-89982.2951, 0.0135)
## Iteration: 30 (-89981.9443, 0.0134)
## Iteration: 40 (-89981.5969, 0.0133)
## Iteration: 50 (-89981.2522, 0.0133)
## Group probs = (0.6418, 0.3089, 0.0493)
##
## Outer iteration: 40
## Iteration: 1 (-89954.8387, 0.0688)
## Iteration: 10 (-89954.5153, 0.0131)
## Iteration: 20 (-89954.1694, 0.0130)
## Iteration: 30 (-89953.8299, 0.0130)
## Iteration: 40 (-89953.4946, 0.0130)
## Iteration: 50 (-89953.1626, 0.0129)
## Group probs = (0.6423, 0.3085, 0.0491)
##
## Outer iteration: 1
## Iteration: 1 (-101709.2289,   Inf)
## Iteration: 10 (-92037.2360, 2.3190)
## Iteration: 20 (-91276.4518, 0.9579)
## Iteration: 30 (-91028.1081, 0.5777)
## Iteration: 40 (-90903.2780, 0.4093)
## Iteration: 50 (-90826.3041, 0.3168)
## Group probs = (0.6438, 0.3094, 0.0468)
##
## Outer iteration: 2
## Iteration: 1 (-91551.3805, 0.3071)
## Iteration: 10 (-91514.2720, 0.2411)
## Iteration: 20 (-91483.7710, 0.2032)
## Iteration: 30 (-91460.0992, 0.1759)
## Iteration: 40 (-91441.0728, 0.1553)
## Iteration: 50 (-91425.3797, 0.1390)
## Group probs = (0.6440, 0.3094, 0.0466)
##
## Outer iteration: 3
## Iteration: 1 (-91492.4384, 0.1723)
## Iteration: 10 (-91479.4139, 0.1290)
## Iteration: 20 (-91466.9948, 0.1186)
## Iteration: 30 (-91456.2417, 0.1095)
## Iteration: 40 (-91446.8176, 0.1016)
## Iteration: 50 (-91438.4744, 0.0948)
## Group probs = (0.6444, 0.3083, 0.0473)
##
## Outer iteration: 4
## Iteration: 1 (-91403.4699, 0.2302)
## Iteration: 10 (-91395.9342, 0.0929)
## Iteration: 20 (-91388.4327, 0.0872)
## Iteration: 30 (-91381.6533, 0.0822)
## Iteration: 40 (-91375.4818, 0.0778)
## Iteration: 50 (-91369.8305, 0.0739)

```

```

## Group probs = (0.6445, 0.3080, 0.0475)
##
## Outer iteration: 5
## Iteration: 1 (-91357.3656, 0.0839)
## Iteration: 10 (-91352.1980, 0.0728)
## Iteration: 20 (-91346.8953, 0.0695)
## Iteration: 30 (-91341.9831, 0.0666)
## Iteration: 40 (-91337.4124, 0.0639)
## Iteration: 50 (-91333.1434, 0.0615)
## Group probs = (0.6439, 0.3082, 0.0478)
##
## Outer iteration: 6
## Iteration: 1 (-91160.7333, 0.0687)
## Iteration: 10 (-91156.8668, 0.0614)
## Iteration: 20 (-91152.8614, 0.0587)
## Iteration: 30 (-91149.0956, 0.0566)
## Iteration: 40 (-91145.5411, 0.0546)
## Iteration: 50 (-91142.1771, 0.0529)
## Group probs = (0.6434, 0.3088, 0.0478)
##
## Outer iteration: 7
## Iteration: 1 (-91065.2677, 0.1333)
## Iteration: 10 (-91062.2156, 0.0523)
## Iteration: 20 (-91059.0108, 0.0508)
## Iteration: 30 (-91055.9643, 0.0494)
## Iteration: 40 (-91053.0603, 0.0481)
## Iteration: 50 (-91050.2868, 0.0469)
## Group probs = (0.6421, 0.3095, 0.0484)
##
## Outer iteration: 8
## Iteration: 1 (-90758.0785, 0.0660)
## Iteration: 10 (-90755.4924, 0.0478)
## Iteration: 20 (-90752.8139, 0.0459)
## Iteration: 30 (-90750.2580, 0.0446)
## Iteration: 40 (-90747.8065, 0.0434)
## Iteration: 50 (-90745.4500, 0.0424)
## Group probs = (0.6428, 0.3085, 0.0487)
##
## Outer iteration: 9
## Iteration: 1 (-90807.4093, 0.1780)
## Iteration: 10 (-90805.1623, 0.0434)
## Iteration: 20 (-90802.7975, 0.0422)
## Iteration: 30 (-90800.5268, 0.0412)
## Iteration: 40 (-90798.3386, 0.0402)
## Iteration: 50 (-90796.2260, 0.0393)
## Group probs = (0.6426, 0.3089, 0.0485)
##
## Outer iteration: 10
## Iteration: 1 (-90813.0214, 0.1134)
## Iteration: 10 (-90811.1375, 0.0381)
## Iteration: 20 (-90809.1214, 0.0376)
## Iteration: 30 (-90807.1710, 0.0371)
## Iteration: 40 (-90805.2807, 0.0365)
## Iteration: 50 (-90803.4468, 0.0359)

```

```
## Group probs = (0.6425, 0.3092, 0.0484)
##
## Outer iteration: 11
## Iteration: 1 (-90765.1478, 0.0697)
## Iteration: 10 (-90763.4837, 0.0355)
## Iteration: 20 (-90761.6954, 0.0351)
## Iteration: 30 (-90759.9591, 0.0346)
## Iteration: 40 (-90758.2709, 0.0341)
## Iteration: 50 (-90756.6280, 0.0337)
## Group probs = (0.6425, 0.3090, 0.0485)
##
## Outer iteration: 12
## Iteration: 1 (-90738.9312, 0.0594)
## Iteration: 10 (-90737.4361, 0.0340)
## Iteration: 20 (-90735.8188, 0.0334)
## Iteration: 30 (-90734.2430, 0.0329)
## Iteration: 40 (-90732.7063, 0.0324)
## Iteration: 50 (-90731.2069, 0.0319)
## Group probs = (0.6417, 0.3098, 0.0485)
##
## Outer iteration: 13
## Iteration: 1 (-90596.5022, 0.1304)
## Iteration: 10 (-90595.1040, 0.0316)
## Iteration: 20 (-90593.6423, 0.0310)
## Iteration: 30 (-90592.2270, 0.0305)
## Iteration: 40 (-90590.8477, 0.0302)
## Iteration: 50 (-90589.5004, 0.0298)
## Group probs = (0.6418, 0.3098, 0.0485)
##
## Outer iteration: 14
## Iteration: 1 (-90583.4038, 0.0335)
## Iteration: 10 (-90582.1927, 0.0299)
## Iteration: 20 (-90580.8759, 0.0295)
## Iteration: 30 (-90579.5872, 0.0292)
## Iteration: 40 (-90578.3253, 0.0288)
## Iteration: 50 (-90577.0891, 0.0285)
## Group probs = (0.6420, 0.3091, 0.0489)
##
## Outer iteration: 15
## Iteration: 1 (-90565.6706, 0.1449)
## Iteration: 10 (-90564.4731, 0.0299)
## Iteration: 20 (-90563.2122, 0.0291)
## Iteration: 30 (-90561.9901, 0.0285)
## Iteration: 40 (-90560.7977, 0.0280)
## Iteration: 50 (-90559.6310, 0.0276)
## Group probs = (0.6419, 0.3091, 0.0489)
##
## Outer iteration: 16
## Iteration: 1 (-90560.1070, 0.0280)
## Iteration: 10 (-90559.0703, 0.0273)
## Iteration: 20 (-90557.9455, 0.0269)
## Iteration: 30 (-90556.8418, 0.0266)
## Iteration: 40 (-90555.7579, 0.0263)
## Iteration: 50 (-90554.6931, 0.0260)
```

```
## Group probs = (0.6428, 0.3082, 0.0490)
##
## Outer iteration: 17
## Iteration: 1 (-90709.0063, 0.1099)
## Iteration: 10 (-90708.0048, 0.0260)
## Iteration: 20 (-90706.9420, 0.0258)
## Iteration: 30 (-90705.9012, 0.0255)
## Iteration: 40 (-90704.8793, 0.0252)
## Iteration: 50 (-90703.8748, 0.0250)
## Group probs = (0.6416, 0.3091, 0.0493)
##
## Outer iteration: 18
## Iteration: 1 (-90469.0828, 0.1324)
## Iteration: 10 (-90468.1501, 0.0253)
## Iteration: 20 (-90467.1731, 0.0246)
## Iteration: 30 (-90466.2162, 0.0243)
## Iteration: 40 (-90465.2755, 0.0241)
## Iteration: 50 (-90464.3498, 0.0239)
## Group probs = (0.6404, 0.3105, 0.0491)
##
## Outer iteration: 19
## Iteration: 1 (-90294.8747, 0.2499)
## Iteration: 10 (-90293.8976, 0.0238)
## Iteration: 20 (-90292.9578, 0.0231)
## Iteration: 30 (-90292.0668, 0.0229)
## Iteration: 40 (-90291.2029, 0.0227)
## Iteration: 50 (-90290.3578, 0.0226)
## Group probs = (0.6408, 0.3098, 0.0494)
##
## Outer iteration: 20
## Iteration: 1 (-90311.8863, 0.1426)
## Iteration: 10 (-90311.0972, 0.0235)
## Iteration: 20 (-90310.2510, 0.0231)
## Iteration: 30 (-90309.4206, 0.0228)
## Iteration: 40 (-90308.6030, 0.0225)
## Iteration: 50 (-90307.7974, 0.0223)
## Group probs = (0.6412, 0.3092, 0.0496)
##
## Outer iteration: 21
## Iteration: 1 (-90350.6756, 0.1046)
## Iteration: 10 (-90349.9051, 0.0230)
## Iteration: 20 (-90349.0932, 0.0226)
## Iteration: 30 (-90348.3012, 0.0222)
## Iteration: 40 (-90347.5235, 0.0219)
## Iteration: 50 (-90346.7579, 0.0217)
## Group probs = (0.6421, 0.3083, 0.0495)
##
## Outer iteration: 22
## Iteration: 1 (-90510.5940, 0.1218)
## Iteration: 10 (-90509.8586, 0.0217)
## Iteration: 20 (-90509.0877, 0.0215)
## Iteration: 30 (-90508.3336, 0.0213)
## Iteration: 40 (-90507.5918, 0.0211)
## Iteration: 50 (-90506.8607, 0.0209)
```

```
## Group probs = (0.6413, 0.3093, 0.0494)
##
## Outer iteration: 23
## Iteration: 1 (-90366.1799, 0.1468)
## Iteration: 10 (-90365.4887, 0.0205)
## Iteration: 20 (-90364.7739, 0.0201)
## Iteration: 30 (-90364.0761, 0.0200)
## Iteration: 40 (-90363.3895, 0.0199)
## Iteration: 50 (-90362.7124, 0.0198)
## Group probs = (0.6417, 0.3093, 0.0490)
##
## Outer iteration: 24
## Iteration: 1 (-90475.4707, 0.0487)
## Iteration: 10 (-90474.8500, 0.0192)
## Iteration: 20 (-90474.1798, 0.0194)
## Iteration: 30 (-90473.5199, 0.0194)
## Iteration: 40 (-90472.8688, 0.0194)
## Iteration: 50 (-90472.2257, 0.0193)
## Group probs = (0.6420, 0.3087, 0.0493)
##
## Outer iteration: 25
## Iteration: 1 (-90482.0535, 0.1321)
## Iteration: 10 (-90481.4416, 0.0200)
## Iteration: 20 (-90480.7931, 0.0197)
## Iteration: 30 (-90480.1573, 0.0194)
## Iteration: 40 (-90479.5307, 0.0192)
## Iteration: 50 (-90478.9120, 0.0190)
## Group probs = (0.6413, 0.3099, 0.0488)
##
## Outer iteration: 26
## Iteration: 1 (-90438.5982, 0.2760)
## Iteration: 10 (-90437.9299, 0.0183)
## Iteration: 20 (-90437.2882, 0.0181)
## Iteration: 30 (-90436.6788, 0.0180)
## Iteration: 40 (-90436.0872, 0.0180)
## Iteration: 50 (-90435.5075, 0.0180)
## Group probs = (0.6412, 0.3100, 0.0488)
##
## Outer iteration: 27
## Iteration: 1 (-90403.6342, 0.0181)
## Iteration: 10 (-90403.1136, 0.0180)
## Iteration: 20 (-90402.5471, 0.0179)
## Iteration: 30 (-90401.9889, 0.0178)
## Iteration: 40 (-90401.4377, 0.0177)
## Iteration: 50 (-90400.8928, 0.0177)
## Group probs = (0.6402, 0.3108, 0.0490)
##
## Outer iteration: 28
## Iteration: 1 (-90202.8536, 0.1085)
## Iteration: 10 (-90202.3346, 0.0181)
## Iteration: 20 (-90201.7954, 0.0177)
## Iteration: 30 (-90201.2664, 0.0175)
## Iteration: 40 (-90200.7444, 0.0174)
## Iteration: 50 (-90200.2283, 0.0173)
```

```
## Group probs = (0.6401, 0.3108, 0.0491)
##
## Outer iteration: 29
## Iteration: 1 (-90198.4663, 0.0235)
## Iteration: 10 (-90198.0037, 0.0172)
## Iteration: 20 (-90197.4970, 0.0171)
## Iteration: 30 (-90196.9960, 0.0170)
## Iteration: 40 (-90196.5001, 0.0169)
## Iteration: 50 (-90196.0091, 0.0168)
## Group probs = (0.6406, 0.3106, 0.0488)
##
## Outer iteration: 30
## Iteration: 1 (-90313.5260, 0.0184)
## Iteration: 10 (-90313.0715, 0.0164)
## Iteration: 20 (-90312.5802, 0.0166)
## Iteration: 30 (-90312.0952, 0.0166)
## Iteration: 40 (-90311.6154, 0.0165)
## Iteration: 50 (-90311.1402, 0.0165)
## Group probs = (0.6403, 0.3106, 0.0491)
##
## Outer iteration: 31
## Iteration: 1 (-90211.0324, 0.0441)
## Iteration: 10 (-90210.5972, 0.0167)
## Iteration: 20 (-90210.1311, 0.0163)
## Iteration: 30 (-90209.6724, 0.0162)
## Iteration: 40 (-90209.2191, 0.0160)
## Iteration: 50 (-90208.7703, 0.0159)
## Group probs = (0.6404, 0.3106, 0.0490)
##
## Outer iteration: 32
## Iteration: 1 (-90229.2396, 0.0190)
## Iteration: 10 (-90228.8366, 0.0158)
## Iteration: 20 (-90228.3937, 0.0157)
## Iteration: 30 (-90227.9546, 0.0157)
## Iteration: 40 (-90227.5194, 0.0156)
## Iteration: 50 (-90227.0878, 0.0155)
## Group probs = (0.6410, 0.3097, 0.0493)
##
## Outer iteration: 33
## Iteration: 1 (-90309.9712, 0.1609)
## Iteration: 10 (-90309.4974, 0.0167)
## Iteration: 20 (-90309.0301, 0.0163)
## Iteration: 30 (-90308.5825, 0.0160)
## Iteration: 40 (-90308.1457, 0.0157)
## Iteration: 50 (-90307.7163, 0.0156)
## Group probs = (0.6416, 0.3092, 0.0493)
##
## Outer iteration: 34
## Iteration: 1 (-90387.9253, 0.0775)
## Iteration: 10 (-90387.5123, 0.0157)
## Iteration: 20 (-90387.0768, 0.0155)
## Iteration: 30 (-90386.6509, 0.0154)
## Iteration: 40 (-90386.2315, 0.0152)
## Iteration: 50 (-90385.8171, 0.0151)
```

```
## Group probs = (0.6416, 0.3095, 0.0489)
##
## Outer iteration: 35
## Iteration: 1 (-90443.1563, 0.0897)
## Iteration: 10 (-90442.7804, 0.0144)
## Iteration: 20 (-90442.3743, 0.0145)
## Iteration: 30 (-90441.9728, 0.0145)
## Iteration: 40 (-90441.5750, 0.0145)
## Iteration: 50 (-90441.1805, 0.0145)
## Group probs = (0.6418, 0.3101, 0.0481)
##
## Outer iteration: 36
## Iteration: 1 (-90566.2382, 0.1987)
## Iteration: 10 (-90565.7868, 0.0137)
## Iteration: 20 (-90565.3509, 0.0139)
## Iteration: 30 (-90564.9396, 0.0140)
## Iteration: 40 (-90564.5425, 0.0140)
## Iteration: 50 (-90564.1547, 0.0140)
## Group probs = (0.6414, 0.3099, 0.0487)
##
## Outer iteration: 37
## Iteration: 1 (-90431.8518, 0.1070)
## Iteration: 10 (-90431.4989, 0.0149)
## Iteration: 20 (-90431.1242, 0.0145)
## Iteration: 30 (-90430.7544, 0.0143)
## Iteration: 40 (-90430.3880, 0.0142)
## Iteration: 50 (-90430.0244, 0.0141)
## Group probs = (0.6401, 0.3108, 0.0491)
##
## Outer iteration: 38
## Iteration: 1 (-90151.2358, 0.0789)
## Iteration: 10 (-90150.8511, 0.0148)
## Iteration: 20 (-90150.4843, 0.0141)
## Iteration: 30 (-90150.1290, 0.0139)
## Iteration: 40 (-90149.7797, 0.0137)
## Iteration: 50 (-90149.4345, 0.0136)
## Group probs = (0.6411, 0.3100, 0.0489)
##
## Outer iteration: 39
## Iteration: 1 (-90338.0482, 0.0880)
## Iteration: 10 (-90337.7113, 0.0135)
## Iteration: 20 (-90337.3637, 0.0136)
## Iteration: 30 (-90337.0209, 0.0135)
## Iteration: 40 (-90336.6813, 0.0134)
## Iteration: 50 (-90336.3444, 0.0134)
## Group probs = (0.6416, 0.3093, 0.0491)
##
## Outer iteration: 40
## Iteration: 1 (-90413.8672, 0.1151)
## Iteration: 10 (-90413.4947, 0.0142)
## Iteration: 20 (-90413.1259, 0.0140)
## Iteration: 30 (-90412.7729, 0.0137)
## Iteration: 40 (-90412.4288, 0.0136)
## Iteration: 50 (-90412.0903, 0.0134)
```

```
## Group probs = (0.6426, 0.3083, 0.0490)
##
## Outer iteration: 1
## Iteration: 1 (-101210.5645, Inf)
## Iteration: 10 (-91544.7156, 2.3192)
## Iteration: 20 (-90782.6967, 0.9609)
## Iteration: 30 (-90533.0327, 0.5806)
## Iteration: 40 (-90407.4280, 0.4116)
## Iteration: 50 (-90329.9626, 0.3186)
## Group probs = (0.6438, 0.3086, 0.0476)
##
## Outer iteration: 2
## Iteration: 1 (-91392.1354, 0.3636)
## Iteration: 10 (-91354.6321, 0.2408)
## Iteration: 20 (-91324.4610, 0.2029)
## Iteration: 30 (-91301.0300, 0.1759)
## Iteration: 40 (-91282.1616, 0.1553)
## Iteration: 50 (-91266.5688, 0.1392)
## Group probs = (0.6429, 0.3090, 0.0481)
##
## Outer iteration: 3
## Iteration: 1 (-91005.4628, 0.1383)
## Iteration: 10 (-90992.2991, 0.1308)
## Iteration: 20 (-90979.7477, 0.1195)
## Iteration: 30 (-90968.8623, 0.1101)
## Iteration: 40 (-90959.3043, 0.1022)
## Iteration: 50 (-90950.8265, 0.0954)
## Group probs = (0.6425, 0.3091, 0.0484)
##
## Outer iteration: 4
## Iteration: 1 (-90833.2579, 0.0948)
## Iteration: 10 (-90825.6725, 0.0928)
## Iteration: 20 (-90818.0724, 0.0873)
## Iteration: 30 (-90811.1849, 0.0825)
## Iteration: 40 (-90804.9016, 0.0783)
## Iteration: 50 (-90799.1376, 0.0745)
## Group probs = (0.6432, 0.3081, 0.0487)
##
## Outer iteration: 5
## Iteration: 1 (-90890.6631, 0.1907)
## Iteration: 10 (-90885.4139, 0.0735)
## Iteration: 20 (-90880.0492, 0.0701)
## Iteration: 30 (-90875.0725, 0.0671)
## Iteration: 40 (-90870.4344, 0.0644)
## Iteration: 50 (-90866.0958, 0.0619)
## Group probs = (0.6432, 0.3084, 0.0484)
##
## Outer iteration: 6
## Iteration: 1 (-90873.2273, 0.1245)
## Iteration: 10 (-90869.2913, 0.0603)
## Iteration: 20 (-90865.1991, 0.0585)
## Iteration: 30 (-90861.3474, 0.0567)
## Iteration: 40 (-90857.7089, 0.0550)
## Iteration: 50 (-90854.2629, 0.0534)
```

```
## Group probs = (0.6428, 0.3085, 0.0487)
##
## Outer iteration: 7
## Iteration: 1 (-90711.6986, 0.0811)
## Iteration: 10 (-90708.5192, 0.0539)
## Iteration: 20 (-90705.1807, 0.0520)
## Iteration: 30 (-90702.0063, 0.0504)
## Iteration: 40 (-90698.9793, 0.0490)
## Iteration: 50 (-90696.0871, 0.0477)
## Group probs = (0.6413, 0.3098, 0.0489)
##
## Outer iteration: 8
## Iteration: 1 (-90435.5575, 0.2009)
## Iteration: 10 (-90432.9284, 0.0477)
## Iteration: 20 (-90430.2009, 0.0461)
## Iteration: 30 (-90427.5907, 0.0450)
## Iteration: 40 (-90425.0837, 0.0440)
## Iteration: 50 (-90422.6717, 0.0430)
## Group probs = (0.6411, 0.3098, 0.0491)
##
## Outer iteration: 9
## Iteration: 1 (-90382.9908, 0.0466)
## Iteration: 10 (-90380.8033, 0.0429)
## Iteration: 20 (-90378.4657, 0.0420)
## Iteration: 30 (-90376.2114, 0.0411)
## Iteration: 40 (-90374.0338, 0.0403)
## Iteration: 50 (-90371.9280, 0.0395)
## Group probs = (0.6409, 0.3099, 0.0492)
##
## Outer iteration: 10
## Iteration: 1 (-90330.3963, 0.0468)
## Iteration: 10 (-90328.5005, 0.0393)
## Iteration: 20 (-90326.4616, 0.0385)
## Iteration: 30 (-90324.4864, 0.0379)
## Iteration: 40 (-90322.5704, 0.0372)
## Iteration: 50 (-90320.7105, 0.0366)
## Group probs = (0.6414, 0.3093, 0.0494)
##
## Outer iteration: 11
## Iteration: 1 (-90369.7111, 0.1028)
## Iteration: 10 (-90367.9924, 0.0368)
## Iteration: 20 (-90366.1531, 0.0362)
## Iteration: 30 (-90364.3677, 0.0355)
## Iteration: 40 (-90362.6315, 0.0349)
## Iteration: 50 (-90360.9416, 0.0344)
## Group probs = (0.6409, 0.3099, 0.0492)
##
## Outer iteration: 12
## Iteration: 1 (-90272.4833, 0.0984)
## Iteration: 10 (-90270.9232, 0.0338)
## Iteration: 20 (-90269.2867, 0.0332)
## Iteration: 30 (-90267.7033, 0.0327)
## Iteration: 40 (-90266.1623, 0.0323)
## Iteration: 50 (-90264.6597, 0.0319)
```

```
## Group probs = (0.6401, 0.3105, 0.0494)
##
## Outer iteration: 13
## Iteration: 1 (-90103.4028, 0.0701)
## Iteration: 10 (-90102.0316, 0.0324)
## Iteration: 20 (-90100.5686, 0.0317)
## Iteration: 30 (-90099.1435, 0.0312)
## Iteration: 40 (-90097.7514, 0.0307)
## Iteration: 50 (-90096.3901, 0.0303)
## Group probs = (0.6403, 0.3105, 0.0492)
##
## Outer iteration: 14
## Iteration: 1 (-90178.4578, 0.0528)
## Iteration: 10 (-90177.2256, 0.0296)
## Iteration: 20 (-90175.8934, 0.0296)
## Iteration: 30 (-90174.5907, 0.0293)
## Iteration: 40 (-90173.3153, 0.0291)
## Iteration: 50 (-90172.0657, 0.0288)
## Group probs = (0.6400, 0.3106, 0.0494)
##
## Outer iteration: 15
## Iteration: 1 (-90069.6920, 0.0294)
## Iteration: 10 (-90068.5510, 0.0290)
## Iteration: 20 (-90067.3246, 0.0285)
## Iteration: 30 (-90066.1259, 0.0281)
## Iteration: 40 (-90064.9511, 0.0278)
## Iteration: 50 (-90063.7988, 0.0275)
## Group probs = (0.6399, 0.3108, 0.0493)
##
## Outer iteration: 16
## Iteration: 1 (-90064.0521, 0.0553)
## Iteration: 10 (-90063.0250, 0.0271)
## Iteration: 20 (-90061.9071, 0.0269)
## Iteration: 30 (-90060.8099, 0.0267)
## Iteration: 40 (-90059.7323, 0.0264)
## Iteration: 50 (-90058.6735, 0.0262)
## Group probs = (0.6401, 0.3107, 0.0492)
##
## Outer iteration: 17
## Iteration: 1 (-90093.5541, 0.0273)
## Iteration: 10 (-90092.5876, 0.0259)
## Iteration: 20 (-90091.5363, 0.0258)
## Iteration: 30 (-90090.5035, 0.0256)
## Iteration: 40 (-90089.4881, 0.0254)
## Iteration: 50 (-90088.4894, 0.0252)
## Group probs = (0.6409, 0.3095, 0.0496)
##
## Outer iteration: 18
## Iteration: 1 (-90176.7424, 0.2246)
## Iteration: 10 (-90175.7009, 0.0269)
## Iteration: 20 (-90174.6592, 0.0260)
## Iteration: 30 (-90173.6589, 0.0255)
## Iteration: 40 (-90172.6844, 0.0250)
## Iteration: 50 (-90171.7296, 0.0246)
```

```

## Group probs = (0.6399, 0.3110, 0.0491)
##
## Outer iteration: 19
## Iteration: 1 (-90063.6322, 0.2873)
## Iteration: 10 (-90062.6662, 0.0237)
## Iteration: 20 (-90061.7216, 0.0233)
## Iteration: 30 (-90060.8167, 0.0231)
## Iteration: 40 (-90059.9347, 0.0230)
## Iteration: 50 (-90059.0697, 0.0229)
## Group probs = (0.6399, 0.3107, 0.0495)
##
## Outer iteration: 20
## Iteration: 1 (-90003.9605, 0.0902)
## Iteration: 10 (-90003.1756, 0.0237)
## Iteration: 20 (-90002.3234, 0.0233)
## Iteration: 30 (-90001.4846, 0.0230)
## Iteration: 40 (-90000.6579, 0.0227)
## Iteration: 50 (-89999.8425, 0.0225)
## Group probs = (0.6405, 0.3098, 0.0497)
##
## Outer iteration: 21
## Iteration: 1 (-90098.3015, 0.1403)
## Iteration: 10 (-90097.5216, 0.0230)
## Iteration: 20 (-90096.7021, 0.0226)
## Iteration: 30 (-90095.9000, 0.0223)
## Iteration: 40 (-90095.1109, 0.0220)
## Iteration: 50 (-90094.3334, 0.0218)
## Group probs = (0.6413, 0.3093, 0.0495)
##
## Outer iteration: 22
## Iteration: 1 (-90233.4969, 0.0408)
## Iteration: 10 (-90232.7867, 0.0211)
## Iteration: 20 (-90232.0226, 0.0212)
## Iteration: 30 (-90231.2696, 0.0211)
## Iteration: 40 (-90230.5263, 0.0210)
## Iteration: 50 (-90229.7924, 0.0208)
## Group probs = (0.6413, 0.3090, 0.0497)
##
## Outer iteration: 23
## Iteration: 1 (-90214.4692, 0.0664)
## Iteration: 10 (-90213.7905, 0.0214)
## Iteration: 20 (-90213.0564, 0.0211)
## Iteration: 30 (-90212.3345, 0.0208)
## Iteration: 40 (-90211.6228, 0.0206)
## Iteration: 50 (-90210.9203, 0.0204)
## Group probs = (0.6406, 0.3098, 0.0496)
##
## Outer iteration: 24
## Iteration: 1 (-90102.8360, 0.1416)
## Iteration: 10 (-90102.1862, 0.0201)
## Iteration: 20 (-90101.5021, 0.0199)
## Iteration: 30 (-90100.8284, 0.0198)
## Iteration: 40 (-90100.1631, 0.0197)
## Iteration: 50 (-90099.5055, 0.0196)

```

```

## Group probs = (0.6411, 0.3092, 0.0497)
##
## Outer iteration: 25
## Iteration: 1 (-90172.4275, 0.1023)
## Iteration: 10 (-90171.8167, 0.0198)
## Iteration: 20 (-90171.1613, 0.0196)
## Iteration: 30 (-90170.5151, 0.0195)
## Iteration: 40 (-90169.8767, 0.0193)
## Iteration: 50 (-90169.2456, 0.0192)
## Group probs = (0.6388, 0.3115, 0.0497)
##
## Outer iteration: 26
## Iteration: 1 (-89786.9257, 0.3395)
## Iteration: 10 (-89786.0692, 0.0201)
## Iteration: 20 (-89785.3852, 0.0188)
## Iteration: 30 (-89784.7603, 0.0184)
## Iteration: 40 (-89784.1623, 0.0183)
## Iteration: 50 (-89783.5796, 0.0182)
## Group probs = (0.6398, 0.3107, 0.0495)
##
## Outer iteration: 27
## Iteration: 1 (-89969.3667, 0.0872)
## Iteration: 10 (-89968.8152, 0.0179)
## Iteration: 20 (-89968.2352, 0.0181)
## Iteration: 30 (-89967.6638, 0.0181)
## Iteration: 40 (-89967.0988, 0.0181)
## Iteration: 50 (-89966.5399, 0.0180)
## Group probs = (0.6396, 0.3104, 0.0500)
##
## Outer iteration: 28
## Iteration: 1 (-89862.5479, 0.1002)
## Iteration: 10 (-89862.0214, 0.0189)
## Iteration: 20 (-89861.4621, 0.0184)
## Iteration: 30 (-89860.9139, 0.0181)
## Iteration: 40 (-89860.3734, 0.0178)
## Iteration: 50 (-89859.8393, 0.0177)
## Group probs = (0.6397, 0.3108, 0.0495)
##
## Outer iteration: 29
## Iteration: 1 (-89963.0905, 0.1403)
## Iteration: 10 (-89962.5807, 0.0167)
## Iteration: 20 (-89962.0464, 0.0169)
## Iteration: 30 (-89961.5240, 0.0169)
## Iteration: 40 (-89961.0096, 0.0169)
## Iteration: 50 (-89960.5015, 0.0169)
## Group probs = (0.6384, 0.3121, 0.0495)
##
## Outer iteration: 30
## Iteration: 1 (-89737.1831, 0.1841)
## Iteration: 10 (-89736.6284, 0.0174)
## Iteration: 20 (-89736.1009, 0.0168)
## Iteration: 30 (-89735.5968, 0.0166)
## Iteration: 40 (-89735.1053, 0.0165)
## Iteration: 50 (-89734.6223, 0.0165)

```

```
## Group probs = (0.6389, 0.3119, 0.0492)
##
## Outer iteration: 31
## Iteration: 1 (-89836.6034, 0.0177)
## Iteration: 10 (-89836.1538, 0.0160)
## Iteration: 20 (-89835.6730, 0.0161)
## Iteration: 30 (-89835.2015, 0.0161)
## Iteration: 40 (-89834.7367, 0.0161)
## Iteration: 50 (-89834.2776, 0.0161)
## Group probs = (0.6400, 0.3104, 0.0496)
##
## Outer iteration: 32
## Iteration: 1 (-89955.6161, 0.2915)
## Iteration: 10 (-89954.9889, 0.0184)
## Iteration: 20 (-89954.4453, 0.0175)
## Iteration: 30 (-89953.9473, 0.0169)
## Iteration: 40 (-89953.4715, 0.0165)
## Iteration: 50 (-89953.0084, 0.0163)
## Group probs = (0.6403, 0.3100, 0.0497)
##
## Outer iteration: 33
## Iteration: 1 (-90015.2872, 0.0471)
## Iteration: 10 (-90014.8365, 0.0165)
## Iteration: 20 (-90014.3645, 0.0163)
## Iteration: 30 (-90013.9060, 0.0160)
## Iteration: 40 (-90013.4560, 0.0159)
## Iteration: 50 (-90013.0122, 0.0157)
## Group probs = (0.6401, 0.3106, 0.0493)
##
## Outer iteration: 34
## Iteration: 1 (-90022.8861, 0.1294)
## Iteration: 10 (-90022.4698, 0.0150)
## Iteration: 20 (-90022.0329, 0.0150)
## Iteration: 30 (-90021.6039, 0.0150)
## Iteration: 40 (-90021.1800, 0.0150)
## Iteration: 50 (-90020.7602, 0.0150)
## Group probs = (0.6404, 0.3098, 0.0498)
##
## Outer iteration: 35
## Iteration: 1 (-90025.3636, 0.1608)
## Iteration: 10 (-90024.9323, 0.0161)
## Iteration: 20 (-90024.4956, 0.0157)
## Iteration: 30 (-90024.0715, 0.0154)
## Iteration: 40 (-90023.6546, 0.0152)
## Iteration: 50 (-90023.2430, 0.0150)
## Group probs = (0.6397, 0.3107, 0.0496)
##
## Outer iteration: 36
## Iteration: 1 (-89906.1834, 0.1430)
## Iteration: 10 (-89905.7715, 0.0148)
## Iteration: 20 (-89905.3597, 0.0145)
## Iteration: 30 (-89904.9603, 0.0144)
## Iteration: 40 (-89904.5676, 0.0143)
## Iteration: 50 (-89904.1796, 0.0143)
```

```

## Group probs = (0.6400, 0.3101, 0.0499)
##
## Outer iteration: 37
## Iteration: 1 (-89919.5297, 0.1119)
## Iteration: 10 (-89919.1611, 0.0149)
## Iteration: 20 (-89918.7683, 0.0147)
## Iteration: 30 (-89918.3819, 0.0145)
## Iteration: 40 (-89917.9999, 0.0143)
## Iteration: 50 (-89917.6215, 0.0142)
## Group probs = (0.6411, 0.3090, 0.0499)
##
## Outer iteration: 38
## Iteration: 1 (-90107.8597, 0.1557)
## Iteration: 10 (-90107.4347, 0.0147)
## Iteration: 20 (-90107.0315, 0.0145)
## Iteration: 30 (-90106.6432, 0.0143)
## Iteration: 40 (-90106.2628, 0.0142)
## Iteration: 50 (-90105.8878, 0.0141)
## Group probs = (0.6411, 0.3093, 0.0496)
##
## Outer iteration: 39
## Iteration: 1 (-90142.3547, 0.0807)
## Iteration: 10 (-90142.0114, 0.0135)
## Iteration: 20 (-90141.6417, 0.0136)
## Iteration: 30 (-90141.2762, 0.0136)
## Iteration: 40 (-90140.9138, 0.0136)
## Iteration: 50 (-90140.5543, 0.0136)
## Group probs = (0.6419, 0.3091, 0.0490)
##
## Outer iteration: 40
## Iteration: 1 (-90329.3832, 0.0407)
## Iteration: 10 (-90329.0336, 0.0127)
## Iteration: 20 (-90328.6697, 0.0130)
## Iteration: 30 (-90328.3129, 0.0132)
## Iteration: 40 (-90327.9606, 0.0132)
## Iteration: 50 (-90327.6119, 0.0132)
## Group probs = (0.6414, 0.3090, 0.0496)
##
## Outer iteration: 1
## Iteration: 1 (-101256.1344, Inf)
## Iteration: 10 (-91685.3661, 2.3159)
## Iteration: 20 (-90935.0385, 0.9581)
## Iteration: 30 (-90690.0730, 0.5784)
## Iteration: 40 (-90566.9877, 0.4100)
## Iteration: 50 (-90491.1275, 0.3173)
## Group probs = (0.6412, 0.3120, 0.0469)
##
## Outer iteration: 2
## Iteration: 1 (-91311.2667, 0.3193)
## Iteration: 10 (-91274.8586, 0.2401)
## Iteration: 20 (-91245.0720, 0.2026)
## Iteration: 30 (-91221.8984, 0.1757)
## Iteration: 40 (-91203.2262, 0.1552)
## Iteration: 50 (-91187.7897, 0.1391)

```

```
## Group probs = (0.6411, 0.3120, 0.0470)
##
## Outer iteration: 3
## Iteration: 1 (-91143.3706, 0.1377)
## Iteration: 10 (-91130.4139, 0.1299)
## Iteration: 20 (-91118.0040, 0.1191)
## Iteration: 30 (-91107.2234, 0.1099)
## Iteration: 40 (-91097.7461, 0.1021)
## Iteration: 50 (-91089.3311, 0.0953)
## Group probs = (0.6413, 0.3121, 0.0467)
##
## Outer iteration: 4
## Iteration: 1 (-91130.8733, 0.1169)
## Iteration: 10 (-91123.3339, 0.0916)
## Iteration: 20 (-91115.7819, 0.0868)
## Iteration: 30 (-91108.9340, 0.0823)
## Iteration: 40 (-91102.6833, 0.0782)
## Iteration: 50 (-91096.9459, 0.0745)
## Group probs = (0.6412, 0.3118, 0.0470)
##
## Outer iteration: 5
## Iteration: 1 (-91033.6699, 0.1044)
## Iteration: 10 (-91028.4482, 0.0737)
## Iteration: 20 (-91023.0752, 0.0704)
## Iteration: 30 (-91018.0831, 0.0674)
## Iteration: 40 (-91013.4254, 0.0647)
## Iteration: 50 (-91009.0646, 0.0623)
## Group probs = (0.6407, 0.3115, 0.0478)
##
## Outer iteration: 6
## Iteration: 1 (-90786.3485, 0.1704)
## Iteration: 10 (-90782.2188, 0.0639)
## Iteration: 20 (-90777.9574, 0.0608)
## Iteration: 30 (-90773.9546, 0.0583)
## Iteration: 40 (-90770.1755, 0.0563)
## Iteration: 50 (-90766.5958, 0.0544)
## Group probs = (0.6407, 0.3116, 0.0477)
##
## Outer iteration: 7
## Iteration: 1 (-90778.0851, 0.0617)
## Iteration: 10 (-90774.9054, 0.0534)
## Iteration: 20 (-90771.5413, 0.0519)
## Iteration: 30 (-90768.3348, 0.0505)
## Iteration: 40 (-90765.2723, 0.0492)
## Iteration: 50 (-90762.3423, 0.0480)
## Group probs = (0.6409, 0.3111, 0.0480)
##
## Outer iteration: 8
## Iteration: 1 (-90745.6266, 0.1170)
## Iteration: 10 (-90742.9564, 0.0485)
## Iteration: 20 (-90740.1256, 0.0470)
## Iteration: 30 (-90737.4122, 0.0458)
## Iteration: 40 (-90734.8051, 0.0446)
## Iteration: 50 (-90732.2960, 0.0436)
```

```

## Group probs = (0.6405, 0.3121, 0.0474)
##
## Outer iteration: 9
## Iteration: 1 (-90732.1895, 0.2516)
## Iteration: 10 (-90729.8660, 0.0419)
## Iteration: 20 (-90727.4518, 0.0414)
## Iteration: 30 (-90725.1400, 0.0408)
## Iteration: 40 (-90722.9127, 0.0402)
## Iteration: 50 (-90720.7612, 0.0396)
## Group probs = (0.6392, 0.3132, 0.0476)
##
## Outer iteration: 10
## Iteration: 1 (-90465.1457, 0.1115)
## Iteration: 10 (-90463.1538, 0.0400)
## Iteration: 20 (-90461.0949, 0.0387)
## Iteration: 30 (-90459.1170, 0.0379)
## Iteration: 40 (-90457.2035, 0.0373)
## Iteration: 50 (-90455.3476, 0.0367)
## Group probs = (0.6393, 0.3129, 0.0478)
##
## Outer iteration: 11
## Iteration: 1 (-90429.1484, 0.0655)
## Iteration: 10 (-90427.4740, 0.0371)
## Iteration: 20 (-90425.6712, 0.0363)
## Iteration: 30 (-90423.9192, 0.0356)
## Iteration: 40 (-90422.2145, 0.0350)
## Iteration: 50 (-90420.5545, 0.0344)
## Group probs = (0.6403, 0.3120, 0.0476)
##
## Outer iteration: 12
## Iteration: 1 (-90632.2794, 0.0842)
## Iteration: 10 (-90630.7124, 0.0341)
## Iteration: 20 (-90629.0728, 0.0338)
## Iteration: 30 (-90627.4838, 0.0333)
## Iteration: 40 (-90625.9359, 0.0329)
## Iteration: 50 (-90624.4253, 0.0324)
## Group probs = (0.6389, 0.3131, 0.0480)
##
## Outer iteration: 13
## Iteration: 1 (-90342.4869, 0.1397)
## Iteration: 10 (-90341.0810, 0.0327)
## Iteration: 20 (-90339.6271, 0.0317)
## Iteration: 30 (-90338.2173, 0.0312)
## Iteration: 40 (-90336.8416, 0.0307)
## Iteration: 50 (-90335.4965, 0.0304)
## Group probs = (0.6398, 0.3122, 0.0479)
##
## Outer iteration: 14
## Iteration: 1 (-90482.2539, 0.1321)
## Iteration: 10 (-90480.9986, 0.0306)
## Iteration: 20 (-90479.6640, 0.0302)
## Iteration: 30 (-90478.3614, 0.0298)
## Iteration: 40 (-90477.0867, 0.0294)
## Iteration: 50 (-90475.8381, 0.0290)

```

```
## Group probs = (0.6398, 0.3120, 0.0482)
##
## Outer iteration: 15
## Iteration: 1 (-90456.5777, 0.0686)
## Iteration: 10 (-90455.4525, 0.0294)
## Iteration: 20 (-90454.2355, 0.0288)
## Iteration: 30 (-90453.0449, 0.0283)
## Iteration: 40 (-90451.8779, 0.0279)
## Iteration: 50 (-90450.7331, 0.0276)
## Group probs = (0.6399, 0.3121, 0.0480)
##
## Outer iteration: 16
## Iteration: 1 (-90469.7348, 0.0501)
## Iteration: 10 (-90468.7148, 0.0270)
## Iteration: 20 (-90467.6034, 0.0268)
## Iteration: 30 (-90466.5118, 0.0266)
## Iteration: 40 (-90465.4393, 0.0264)
## Iteration: 50 (-90464.3851, 0.0262)
## Group probs = (0.6397, 0.3125, 0.0478)
##
## Outer iteration: 17
## Iteration: 1 (-90438.6563, 0.0743)
## Iteration: 10 (-90437.6954, 0.0256)
## Iteration: 20 (-90436.6696, 0.0254)
## Iteration: 30 (-90435.6688, 0.0252)
## Iteration: 40 (-90434.6874, 0.0250)
## Iteration: 50 (-90433.7231, 0.0248)
## Group probs = (0.6385, 0.3138, 0.0477)
##
## Outer iteration: 18
## Iteration: 1 (-90257.9231, 0.2152)
## Iteration: 10 (-90256.9486, 0.0248)
## Iteration: 20 (-90255.9793, 0.0242)
## Iteration: 30 (-90255.0513, 0.0240)
## Iteration: 40 (-90254.1482, 0.0239)
## Iteration: 50 (-90253.2639, 0.0237)
## Group probs = (0.6383, 0.3138, 0.0479)
##
## Outer iteration: 19
## Iteration: 1 (-90186.2986, 0.0243)
## Iteration: 10 (-90185.4978, 0.0243)
## Iteration: 20 (-90184.6258, 0.0240)
## Iteration: 30 (-90183.7674, 0.0237)
## Iteration: 40 (-90182.9219, 0.0235)
## Iteration: 50 (-90182.0887, 0.0233)
## Group probs = (0.6384, 0.3137, 0.0480)
##
## Outer iteration: 20
## Iteration: 1 (-90178.7074, 0.0403)
## Iteration: 10 (-90177.9621, 0.0234)
## Iteration: 20 (-90177.1474, 0.0231)
## Iteration: 30 (-90176.3447, 0.0228)
## Iteration: 40 (-90175.5534, 0.0226)
## Iteration: 50 (-90174.7728, 0.0224)
```

```
## Group probs = (0.6382, 0.3136, 0.0482)
##
## Outer iteration: 21
## Iteration: 1 (-90136.4132, 0.0290)
## Iteration: 10 (-90135.7136, 0.0226)
## Iteration: 20 (-90134.9506, 0.0222)
## Iteration: 30 (-90134.1987, 0.0220)
## Iteration: 40 (-90133.4570, 0.0218)
## Iteration: 50 (-90132.7251, 0.0215)
## Group probs = (0.6377, 0.3141, 0.0482)
##
## Outer iteration: 22
## Iteration: 1 (-90046.1401, 0.0857)
## Iteration: 10 (-90045.4702, 0.0213)
## Iteration: 20 (-90044.7526, 0.0211)
## Iteration: 30 (-90044.0480, 0.0209)
## Iteration: 40 (-90043.3536, 0.0208)
## Iteration: 50 (-90042.6683, 0.0206)
## Group probs = (0.6383, 0.3135, 0.0482)
##
## Outer iteration: 23
## Iteration: 1 (-90123.7027, 0.0871)
## Iteration: 10 (-90123.0724, 0.0208)
## Iteration: 20 (-90122.3935, 0.0206)
## Iteration: 30 (-90121.7245, 0.0204)
## Iteration: 40 (-90121.0640, 0.0203)
## Iteration: 50 (-90120.4114, 0.0201)
## Group probs = (0.6385, 0.3131, 0.0485)
##
## Outer iteration: 24
## Iteration: 1 (-90126.1157, 0.0908)
## Iteration: 10 (-90125.5083, 0.0206)
## Iteration: 20 (-90124.8542, 0.0203)
## Iteration: 30 (-90124.2114, 0.0200)
## Iteration: 40 (-90123.5777, 0.0198)
## Iteration: 50 (-90122.9519, 0.0196)
## Group probs = (0.6372, 0.3146, 0.0483)
##
## Outer iteration: 25
## Iteration: 1 (-89933.3023, 0.2533)
## Iteration: 10 (-89932.6198, 0.0195)
## Iteration: 20 (-89931.9797, 0.0188)
## Iteration: 30 (-89931.3719, 0.0187)
## Iteration: 40 (-89930.7808, 0.0186)
## Iteration: 50 (-89930.2008, 0.0185)
## Group probs = (0.6381, 0.3135, 0.0484)
##
## Outer iteration: 26
## Iteration: 1 (-90056.1586, 0.1726)
## Iteration: 10 (-90055.5935, 0.0191)
## Iteration: 20 (-90055.0105, 0.0189)
## Iteration: 30 (-90054.4384, 0.0187)
## Iteration: 40 (-90053.8740, 0.0185)
## Iteration: 50 (-90053.3161, 0.0184)
```

```
## Group probs = (0.6374, 0.3143, 0.0483)
##
## Outer iteration: 27
## Iteration: 1 (-89959.8650, 0.1423)
## Iteration: 10 (-89959.3415, 0.0179)
## Iteration: 20 (-89958.7939, 0.0177)
## Iteration: 30 (-89958.2588, 0.0176)
## Iteration: 40 (-89957.7321, 0.0176)
## Iteration: 50 (-89957.2120, 0.0175)
## Group probs = (0.6386, 0.3131, 0.0482)
##
## Outer iteration: 28
## Iteration: 1 (-90172.8635, 0.1428)
## Iteration: 10 (-90172.3130, 0.0179)
## Iteration: 20 (-90171.7667, 0.0178)
## Iteration: 30 (-90171.2371, 0.0177)
## Iteration: 40 (-90170.7171, 0.0176)
## Iteration: 50 (-90170.2039, 0.0174)
## Group probs = (0.6387, 0.3130, 0.0483)
##
## Outer iteration: 29
## Iteration: 1 (-90156.5242, 0.0464)
## Iteration: 10 (-90156.0419, 0.0178)
## Iteration: 20 (-90155.5233, 0.0176)
## Iteration: 30 (-90155.0143, 0.0174)
## Iteration: 40 (-90154.5125, 0.0172)
## Iteration: 50 (-90154.0165, 0.0171)
## Group probs = (0.6395, 0.3122, 0.0483)
##
## Outer iteration: 30
## Iteration: 1 (-90306.0881, 0.1227)
## Iteration: 10 (-90305.5798, 0.0175)
## Iteration: 20 (-90305.0643, 0.0173)
## Iteration: 30 (-90304.5652, 0.0170)
## Iteration: 40 (-90304.0761, 0.0168)
## Iteration: 50 (-90303.5940, 0.0167)
## Group probs = (0.6403, 0.3115, 0.0482)
##
## Outer iteration: 31
## Iteration: 1 (-90450.2011, 0.0861)
## Iteration: 10 (-90449.7381, 0.0165)
## Iteration: 20 (-90449.2540, 0.0165)
## Iteration: 30 (-90448.7790, 0.0163)
## Iteration: 40 (-90448.3103, 0.0162)
## Iteration: 50 (-90447.8469, 0.0161)
## Group probs = (0.6400, 0.3121, 0.0479)
##
## Outer iteration: 32
## Iteration: 1 (-90452.5050, 0.1594)
## Iteration: 10 (-90452.0572, 0.0153)
## Iteration: 20 (-90451.5930, 0.0154)
## Iteration: 30 (-90451.1410, 0.0154)
## Iteration: 40 (-90450.6968, 0.0154)
## Iteration: 50 (-90450.2582, 0.0154)
```

```
## Group probs = (0.6395, 0.3127, 0.0478)
##
## Outer iteration: 33
## Iteration: 1 (-90359.2602, 0.1008)
## Iteration: 10 (-90358.8299, 0.0155)
## Iteration: 20 (-90358.3854, 0.0152)
## Iteration: 30 (-90357.9552, 0.0152)
## Iteration: 40 (-90357.5337, 0.0151)
## Iteration: 50 (-90357.1183, 0.0151)
## Group probs = (0.6401, 0.3118, 0.0481)
##
## Outer iteration: 34
## Iteration: 1 (-90412.2129, 0.1790)
## Iteration: 10 (-90411.7788, 0.0163)
## Iteration: 20 (-90411.3450, 0.0159)
## Iteration: 30 (-90410.9242, 0.0156)
## Iteration: 40 (-90410.5109, 0.0154)
## Iteration: 50 (-90410.1029, 0.0152)
## Group probs = (0.6393, 0.3125, 0.0482)
##
## Outer iteration: 35
## Iteration: 1 (-90274.9168, 0.1136)
## Iteration: 10 (-90274.5294, 0.0151)
## Iteration: 20 (-90274.1278, 0.0148)
## Iteration: 30 (-90273.7335, 0.0147)
## Iteration: 40 (-90273.3436, 0.0146)
## Iteration: 50 (-90272.9574, 0.0146)
## Group probs = (0.6389, 0.3129, 0.0482)
##
## Outer iteration: 36
## Iteration: 1 (-90225.8280, 0.0704)
## Iteration: 10 (-90225.4651, 0.0145)
## Iteration: 20 (-90225.0790, 0.0143)
## Iteration: 30 (-90224.7009, 0.0143)
## Iteration: 40 (-90224.3279, 0.0142)
## Iteration: 50 (-90223.9589, 0.0142)
## Group probs = (0.6387, 0.3129, 0.0483)
##
## Outer iteration: 37
## Iteration: 1 (-90154.6055, 0.0293)
## Iteration: 10 (-90154.2681, 0.0146)
## Iteration: 20 (-90153.9015, 0.0144)
## Iteration: 30 (-90153.5386, 0.0143)
## Iteration: 40 (-90153.1788, 0.0142)
## Iteration: 50 (-90152.8218, 0.0141)
## Group probs = (0.6386, 0.3134, 0.0481)
##
## Outer iteration: 38
## Iteration: 1 (-90161.7209, 0.0940)
## Iteration: 10 (-90161.3905, 0.0137)
## Iteration: 20 (-90161.0366, 0.0137)
## Iteration: 30 (-90160.6869, 0.0137)
## Iteration: 40 (-90160.3405, 0.0137)
## Iteration: 50 (-90159.9968, 0.0137)
```

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## Group probs = (0.6402, 0.3118, 0.0480)
##
## Outer iteration: 39
## Iteration: 1 (-90445.2336, 0.2036)
## Iteration: 10 (-90444.7613, 0.0146)
## Iteration: 20 (-90444.3634, 0.0144)
## Iteration: 30 (-90443.9930, 0.0142)
## Iteration: 40 (-90443.6358, 0.0140)
## Iteration: 50 (-90443.2862, 0.0138)
## Group probs = (0.6401, 0.3118, 0.0481)
##
## Outer iteration: 40
## Iteration: 1 (-90407.4541, 0.0286)
## Iteration: 10 (-90407.1395, 0.0138)
## Iteration: 20 (-90406.7991, 0.0136)
## Iteration: 30 (-90406.4623, 0.0135)
## Iteration: 40 (-90406.1282, 0.0134)
## Iteration: 50 (-90405.7967, 0.0133)
## Group probs = (0.6409, 0.3115, 0.0476)
##
## CCES_2016
## Outer iteration: 1
## Iteration: 1 (-503384.0647, Inf)
## Iteration: 10 (-469489.3585, 4.8848)
## Iteration: 20 (-467009.4909, 2.1810)
## Iteration: 30 (-466185.3699, 1.3815)
## Iteration: 40 (-465771.2666, 1.0041)
## Iteration: 50 (-465521.9542, 0.7848)
## Group probs = (0.7353, 0.2205, 0.0443)
##
## Outer iteration: 2
## Iteration: 1 (-466508.5670, 0.8351)
## Iteration: 10 (-466375.6037, 0.6188)
## Iteration: 20 (-466268.8785, 0.5197)
## Iteration: 30 (-466189.0218, 0.4474)
## Iteration: 40 (-466127.1723, 0.3919)
## Iteration: 50 (-466077.9840, 0.3479)
## Group probs = (0.7384, 0.2181, 0.0436)
##
## Outer iteration: 3
## Iteration: 1 (-468870.2659, 0.4631)
## Iteration: 10 (-468833.3713, 0.3150)
## Iteration: 20 (-468799.4666, 0.2856)
## Iteration: 30 (-468771.0760, 0.2605)
## Iteration: 40 (-468746.9960, 0.2391)
## Iteration: 50 (-468726.3478, 0.2206)
## Group probs = (0.7363, 0.2196, 0.0442)
##
## Outer iteration: 4
## Iteration: 1 (-466873.1269, 0.2548)
## Iteration: 10 (-466856.4176, 0.2075)
## Iteration: 20 (-466840.3032, 0.1930)
## Iteration: 30 (-466826.1666, 0.1803)
## Iteration: 40 (-466813.6711, 0.1692)

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## Iteration: 50 (-466802.5551, 0.1592)
## Group probs = (0.7344, 0.2208, 0.0448)
##
## Outer iteration: 5
## Iteration: 1 (-465121.0226, 0.3630)
## Iteration: 10 (-465111.4584, 0.1524)
## Iteration: 20 (-465102.0740, 0.1439)
## Iteration: 30 (-465093.6358, 0.1365)
## Iteration: 40 (-465086.0049, 0.1297)
## Iteration: 50 (-465079.0718, 0.1236)
## Group probs = (0.7330, 0.2218, 0.0452)
##
## Outer iteration: 6
## Iteration: 1 (-463749.2333, 0.3398)
## Iteration: 10 (-463742.9219, 0.1199)
## Iteration: 20 (-463736.6935, 0.1144)
## Iteration: 30 (-463731.0263, 0.1095)
## Iteration: 40 (-463725.8371, 0.1050)
## Iteration: 50 (-463721.0632, 0.1009)
## Group probs = (0.7332, 0.2217, 0.0451)
##
## Outer iteration: 7
## Iteration: 1 (-463825.8273, 0.1008)
## Iteration: 10 (-463821.6996, 0.0977)
## Iteration: 20 (-463817.4684, 0.0941)
## Iteration: 30 (-463813.5507, 0.0907)
## Iteration: 40 (-463809.9099, 0.0876)
## Iteration: 50 (-463806.5161, 0.0846)
## Group probs = (0.7312, 0.2234, 0.0454)
##
## Outer iteration: 8
## Iteration: 1 (-462061.3777, 0.1657)
## Iteration: 10 (-462058.2716, 0.0829)
## Iteration: 20 (-462055.1911, 0.0800)
## Iteration: 30 (-462052.3116, 0.0774)
## Iteration: 40 (-462049.6096, 0.0750)
## Iteration: 50 (-462047.0677, 0.0728)
## Group probs = (0.7340, 0.2213, 0.0447)
##
## Outer iteration: 9
## Iteration: 1 (-464461.6447, 0.0966)
## Iteration: 10 (-464459.1501, 0.0708)
## Iteration: 20 (-464456.7502, 0.0691)
## Iteration: 30 (-464454.5141, 0.0672)
## Iteration: 40 (-464452.4110, 0.0654)
## Iteration: 50 (-464450.4239, 0.0637)
## Group probs = (0.7364, 0.2199, 0.0438)
##
## Outer iteration: 10
## Iteration: 1 (-466756.3698, 0.3711)
## Iteration: 10 (-466754.5254, 0.0623)
## Iteration: 20 (-466752.7397, 0.0608)
## Iteration: 30 (-466751.0489, 0.0592)
## Iteration: 40 (-466749.4400, 0.0578)
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## Iteration: 50 (-466747.9054, 0.0564)
## Group probs = (0.7351, 0.2206, 0.0443)
##
## Outer iteration: 11
## Iteration: 1 (-465468.3901, 0.1753)
## Iteration: 10 (-465467.0244, 0.0553)
## Iteration: 20 (-465465.6023, 0.0539)
## Iteration: 30 (-465464.2418, 0.0527)
## Iteration: 40 (-465462.9381, 0.0516)
## Iteration: 50 (-465461.6874, 0.0505)
## Group probs = (0.7347, 0.2210, 0.0443)
##
## Outer iteration: 12
## Iteration: 1 (-465184.4881, 0.0519)
## Iteration: 10 (-465183.3776, 0.0498)
## Iteration: 20 (-465182.2150, 0.0487)
## Iteration: 30 (-465181.0988, 0.0477)
## Iteration: 40 (-465180.0248, 0.0468)
## Iteration: 50 (-465178.9901, 0.0459)
## Group probs = (0.7361, 0.2201, 0.0439)
##
## Outer iteration: 13
## Iteration: 1 (-466414.7298, 0.1751)
## Iteration: 10 (-466413.7686, 0.0450)
## Iteration: 20 (-466412.8029, 0.0442)
## Iteration: 30 (-466411.8737, 0.0434)
## Iteration: 40 (-466410.9768, 0.0426)
## Iteration: 50 (-466410.1101, 0.0419)
## Group probs = (0.7375, 0.2189, 0.0436)
##
## Outer iteration: 14
## Iteration: 1 (-467610.6110, 0.0970)
## Iteration: 10 (-467609.7504, 0.0410)
## Iteration: 20 (-467608.9287, 0.0404)
## Iteration: 30 (-467608.1385, 0.0397)
## Iteration: 40 (-467607.3743, 0.0391)
## Iteration: 50 (-467606.6336, 0.0385)
## Group probs = (0.7367, 0.2190, 0.0442)
##
## Outer iteration: 15
## Iteration: 1 (-466826.5917, 0.4816)
## Iteration: 10 (-466825.3529, 0.0398)
## Iteration: 20 (-466824.3449, 0.0386)
## Iteration: 30 (-466823.4694, 0.0377)
## Iteration: 40 (-466822.6738, 0.0370)
## Iteration: 50 (-466821.9326, 0.0364)
## Group probs = (0.7374, 0.2185, 0.0442)
##
## Outer iteration: 16
## Iteration: 1 (-467306.8460, 0.1350)
## Iteration: 10 (-467306.2098, 0.0357)
## Iteration: 20 (-467305.5565, 0.0352)
## Iteration: 30 (-467304.9269, 0.0347)
## Iteration: 40 (-467304.3179, 0.0343)
```

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## Iteration: 50 (-467303.7275, 0.0338)
## Group probs = (0.7388, 0.2175, 0.0437)
##
## Outer iteration: 17
## Iteration: 1 (-468672.5657, 0.1926)
## Iteration: 10 (-468672.0029, 0.0333)
## Iteration: 20 (-468671.4475, 0.0329)
## Iteration: 30 (-468670.9086, 0.0325)
## Iteration: 40 (-468670.3841, 0.0321)
## Iteration: 50 (-468669.8727, 0.0316)
## Group probs = (0.7377, 0.2181, 0.0442)
##
## Outer iteration: 18
## Iteration: 1 (-467590.4507, 0.1894)
## Iteration: 10 (-467589.9442, 0.0315)
## Iteration: 20 (-467589.4339, 0.0310)
## Iteration: 30 (-467588.9403, 0.0306)
## Iteration: 40 (-467588.4607, 0.0303)
## Iteration: 50 (-467587.9940, 0.0299)
## Group probs = (0.7381, 0.2179, 0.0440)
##
## Outer iteration: 19
## Iteration: 1 (-467947.4885, 0.0862)
## Iteration: 10 (-467947.0808, 0.0295)
## Iteration: 20 (-467946.6419, 0.0292)
## Iteration: 30 (-467946.2130, 0.0288)
## Iteration: 40 (-467945.7935, 0.0285)
## Iteration: 50 (-467945.3830, 0.0282)
## Group probs = (0.7366, 0.2192, 0.0442)
##
## Outer iteration: 20
## Iteration: 1 (-466746.0449, 0.0661)
## Iteration: 10 (-466745.5255, 0.0283)
## Iteration: 20 (-466745.0771, 0.0278)
## Iteration: 30 (-466744.6646, 0.0274)
## Iteration: 40 (-466744.2727, 0.0270)
## Iteration: 50 (-466743.8949, 0.0267)
## Group probs = (0.7362, 0.2193, 0.0445)
##
## Outer iteration: 21
## Iteration: 1 (-466232.1534, 0.2800)
## Iteration: 10 (-466231.7119, 0.0269)
## Iteration: 20 (-466231.2951, 0.0264)
## Iteration: 30 (-466230.9056, 0.0261)
## Iteration: 40 (-466230.5342, 0.0258)
## Iteration: 50 (-466230.1763, 0.0255)
## Group probs = (0.7366, 0.2193, 0.0441)
##
## Outer iteration: 22
## Iteration: 1 (-466679.7759, 0.3001)
## Iteration: 10 (-466679.3700, 0.0256)
## Iteration: 20 (-466678.9986, 0.0252)
## Iteration: 30 (-466678.6534, 0.0248)
## Iteration: 40 (-466678.3247, 0.0245)
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## Iteration: 50 (-466678.0079, 0.0243)
## Group probs = (0.7365, 0.2193, 0.0442)
##
## Outer iteration: 23
## Iteration: 1 (-466632.1551, 0.1236)
## Iteration: 10 (-466631.8709, 0.0240)
## Iteration: 20 (-466631.5729, 0.0238)
## Iteration: 30 (-466631.2807, 0.0236)
## Iteration: 40 (-466630.9938, 0.0233)
## Iteration: 50 (-466630.7118, 0.0231)
## Group probs = (0.7346, 0.2212, 0.0442)
##
## Outer iteration: 24
## Iteration: 1 (-465078.4814, 0.2627)
## Iteration: 10 (-465077.6539, 0.0249)
## Iteration: 20 (-465077.1100, 0.0240)
## Iteration: 30 (-465076.6861, 0.0233)
## Iteration: 40 (-465076.3256, 0.0229)
## Iteration: 50 (-465076.0030, 0.0225)
## Group probs = (0.7340, 0.2216, 0.0444)
##
## Outer iteration: 25
## Iteration: 1 (-464571.4152, 0.1530)
## Iteration: 10 (-464571.1360, 0.0221)
## Iteration: 20 (-464570.8702, 0.0218)
## Iteration: 30 (-464570.6146, 0.0216)
## Iteration: 40 (-464570.3663, 0.0214)
## Iteration: 50 (-464570.1239, 0.0212)
## Group probs = (0.7343, 0.2213, 0.0444)
##
## Outer iteration: 26
## Iteration: 1 (-464807.0632, 0.0967)
## Iteration: 10 (-464806.8138, 0.0211)
## Iteration: 20 (-464806.5657, 0.0209)
## Iteration: 30 (-464806.3278, 0.0207)
## Iteration: 40 (-464806.0968, 0.0206)
## Iteration: 50 (-464805.8711, 0.0204)
## Group probs = (0.7325, 0.2225, 0.0450)
##
## Outer iteration: 27
## Iteration: 1 (-463044.5699, 0.2897)
## Iteration: 10 (-463044.1696, 0.0213)
## Iteration: 20 (-463043.8884, 0.0206)
## Iteration: 30 (-463043.6314, 0.0203)
## Iteration: 40 (-463043.3896, 0.0201)
## Iteration: 50 (-463043.1586, 0.0199)
## Group probs = (0.7325, 0.2226, 0.0449)
##
## Outer iteration: 28
## Iteration: 1 (-463044.5176, 0.0274)
## Iteration: 10 (-463044.2988, 0.0198)
## Iteration: 20 (-463044.0728, 0.0196)
## Iteration: 30 (-463043.8549, 0.0195)
## Iteration: 40 (-463043.6431, 0.0193)
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## Iteration: 50 (-463043.4366, 0.0192)
## Group probs = (0.7311, 0.2237, 0.0452)
##
## Outer iteration: 29
## Iteration: 1 (-461804.7604, 0.1485)
## Iteration: 10 (-461804.4842, 0.0197)
## Iteration: 20 (-461804.2678, 0.0192)
## Iteration: 30 (-461804.0605, 0.0190)
## Iteration: 40 (-461803.8593, 0.0188)
## Iteration: 50 (-461803.6632, 0.0186)
## Group probs = (0.7308, 0.2240, 0.0451)
##
## Outer iteration: 30
## Iteration: 1 (-461621.4614, 0.0197)
## Iteration: 10 (-461621.2808, 0.0186)
## Iteration: 20 (-461621.0913, 0.0184)
## Iteration: 30 (-461620.9057, 0.0182)
## Iteration: 40 (-461620.7236, 0.0181)
## Iteration: 50 (-461620.5445, 0.0180)
## Group probs = (0.7330, 0.2225, 0.0445)
##
## Outer iteration: 31
## Iteration: 1 (-463637.9476, 0.1552)
## Iteration: 10 (-463637.6661, 0.0179)
## Iteration: 20 (-463637.4820, 0.0178)
## Iteration: 30 (-463637.3067, 0.0176)
## Iteration: 40 (-463637.1356, 0.0175)
## Iteration: 50 (-463636.9676, 0.0174)
## Group probs = (0.7358, 0.2204, 0.0438)
##
## Outer iteration: 32
## Iteration: 1 (-466087.0140, 0.2322)
## Iteration: 10 (-466086.5870, 0.0177)
## Iteration: 20 (-466086.4011, 0.0173)
## Iteration: 30 (-466086.2322, 0.0171)
## Iteration: 40 (-466086.0700, 0.0170)
## Iteration: 50 (-466085.9117, 0.0168)
## Group probs = (0.7363, 0.2197, 0.0439)
##
## Outer iteration: 33
## Iteration: 1 (-466529.8674, 0.1088)
## Iteration: 10 (-466529.6470, 0.0169)
## Iteration: 20 (-466529.4561, 0.0167)
## Iteration: 30 (-466529.2829, 0.0166)
## Iteration: 40 (-466529.1196, 0.0165)
## Iteration: 50 (-466528.9624, 0.0164)
## Group probs = (0.7365, 0.2194, 0.0440)
##
## Outer iteration: 34
## Iteration: 1 (-466584.5848, 0.0164)
## Iteration: 10 (-466584.4173, 0.0163)
## Iteration: 20 (-466584.2570, 0.0162)
## Iteration: 30 (-466584.1050, 0.0161)
## Iteration: 40 (-466583.9579, 0.0160)

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## Iteration: 50 (-466583.8143, 0.0159)
## Group probs = (0.7351, 0.2204, 0.0444)
##
## Outer iteration: 35
## Iteration: 1 (-465334.1309, 0.0782)
## Iteration: 10 (-465333.9429, 0.0161)
## Iteration: 20 (-465333.7990, 0.0158)
## Iteration: 30 (-465333.6600, 0.0157)
## Iteration: 40 (-465333.5236, 0.0156)
## Iteration: 50 (-465333.3893, 0.0155)
## Group probs = (0.7370, 0.2194, 0.0436)
##
## Outer iteration: 36
## Iteration: 1 (-467160.9236, 0.3878)
## Iteration: 10 (-467160.5398, 0.0171)
## Iteration: 20 (-467160.3007, 0.0162)
## Iteration: 30 (-467160.1028, 0.0158)
## Iteration: 40 (-467159.9287, 0.0156)
## Iteration: 50 (-467159.7699, 0.0154)
## Group probs = (0.7356, 0.2203, 0.0441)
##
## Outer iteration: 37
## Iteration: 1 (-465825.7570, 0.1833)
## Iteration: 10 (-465825.6033, 0.0151)
## Iteration: 20 (-465825.4725, 0.0149)
## Iteration: 30 (-465825.3458, 0.0149)
## Iteration: 40 (-465825.2217, 0.0148)
## Iteration: 50 (-465825.0997, 0.0147)
## Group probs = (0.7340, 0.2217, 0.0444)
##
## Outer iteration: 38
## Iteration: 1 (-464475.6268, 0.0509)
## Iteration: 10 (-464475.3251, 0.0153)
## Iteration: 20 (-464475.1299, 0.0150)
## Iteration: 30 (-464474.9680, 0.0148)
## Iteration: 40 (-464474.8237, 0.0146)
## Iteration: 50 (-464474.6899, 0.0145)
## Group probs = (0.7340, 0.2217, 0.0442)
##
## Outer iteration: 39
## Iteration: 1 (-464559.1673, 0.0154)
## Iteration: 10 (-464559.0322, 0.0145)
## Iteration: 20 (-464558.9005, 0.0143)
## Iteration: 30 (-464558.7768, 0.0142)
## Iteration: 40 (-464558.6581, 0.0141)
## Iteration: 50 (-464558.5429, 0.0140)
## Group probs = (0.7317, 0.2235, 0.0448)
##
## Outer iteration: 40
## Iteration: 1 (-462448.9408, 0.1588)
## Iteration: 10 (-462448.6840, 0.0143)
## Iteration: 20 (-462448.5541, 0.0139)
## Iteration: 30 (-462448.4361, 0.0138)
## Iteration: 40 (-462448.3235, 0.0137)
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## Iteration: 50 (-462448.2141, 0.0136)
## Group probs = (0.7300, 0.2247, 0.0452)
##
## Outer iteration: 1
## Iteration: 1 (-504022.8340, Inf)
## Iteration: 10 (-470083.7811, 4.8893)
## Iteration: 20 (-467590.3691, 2.1852)
## Iteration: 30 (-466759.5644, 1.3852)
## Iteration: 40 (-466341.1487, 1.0074)
## Iteration: 50 (-466088.7792, 0.7876)
## Group probs = (0.7368, 0.2195, 0.0437)
##
## Outer iteration: 2
## Iteration: 1 (-467895.2542, 0.8332)
## Iteration: 10 (-467760.3798, 0.6220)
## Iteration: 20 (-467651.9071, 0.5228)
## Iteration: 30 (-467570.6431, 0.4501)
## Iteration: 40 (-467507.6533, 0.3942)
## Iteration: 50 (-467457.5295, 0.3499)
## Group probs = (0.7368, 0.2196, 0.0436)
##
## Outer iteration: 3
## Iteration: 1 (-467644.5044, 0.3920)
## Iteration: 10 (-467607.0929, 0.3178)
## Iteration: 20 (-467572.5352, 0.2876)
## Iteration: 30 (-467543.6080, 0.2621)
## Iteration: 40 (-467519.0753, 0.2404)
## Iteration: 50 (-467498.0397, 0.2218)
## Group probs = (0.7389, 0.2178, 0.0433)
##
## Outer iteration: 4
## Iteration: 1 (-469305.4590, 0.2411)
## Iteration: 10 (-469288.1882, 0.2078)
## Iteration: 20 (-469271.4948, 0.1940)
## Iteration: 30 (-469256.8702, 0.1814)
## Iteration: 40 (-469243.9571, 0.1702)
## Iteration: 50 (-469232.4802, 0.1602)
## Group probs = (0.7373, 0.2189, 0.0437)
##
## Outer iteration: 5
## Iteration: 1 (-467712.8650, 0.1604)
## Iteration: 10 (-467703.2883, 0.1529)
## Iteration: 20 (-467693.8032, 0.1445)
## Iteration: 30 (-467685.2584, 0.1370)
## Iteration: 40 (-467677.5223, 0.1302)
## Iteration: 50 (-467670.4884, 0.1239)
## Group probs = (0.7386, 0.2181, 0.0434)
##
## Outer iteration: 6
## Iteration: 1 (-468787.3788, 0.1241)
## Iteration: 10 (-468781.3218, 0.1193)
## Iteration: 20 (-468775.1866, 0.1142)
## Iteration: 30 (-468769.5687, 0.1094)
## Iteration: 40 (-468764.4029, 0.1049)

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## Iteration: 50 (-468759.6365, 0.1007)
## Group probs = (0.7377, 0.2188, 0.0435)
##
## Outer iteration: 7
## Iteration: 1 (-467963.2806, 0.1002)
## Iteration: 10 (-467959.2140, 0.0975)
## Iteration: 20 (-467955.0521, 0.0937)
## Iteration: 30 (-467951.1860, 0.0903)
## Iteration: 40 (-467947.5842, 0.0871)
## Iteration: 50 (-467944.2206, 0.0841)
## Group probs = (0.7384, 0.2183, 0.0433)
##
## Outer iteration: 8
## Iteration: 1 (-468579.4943, 0.0844)
## Iteration: 10 (-468576.5706, 0.0817)
## Iteration: 20 (-468573.5313, 0.0792)
## Iteration: 30 (-468570.6815, 0.0767)
## Iteration: 40 (-468568.0030, 0.0744)
## Iteration: 50 (-468565.4805, 0.0722)
## Group probs = (0.7380, 0.2188, 0.0432)
##
## Outer iteration: 9
## Iteration: 1 (-468233.3031, 0.1134)
## Iteration: 10 (-468231.1141, 0.0705)
## Iteration: 20 (-468228.8446, 0.0684)
## Iteration: 30 (-468226.7033, 0.0665)
## Iteration: 40 (-468224.6761, 0.0647)
## Iteration: 50 (-468222.7530, 0.0629)
## Group probs = (0.7389, 0.2181, 0.0430)
##
## Outer iteration: 10
## Iteration: 1 (-469119.9190, 0.0627)
## Iteration: 10 (-469118.2274, 0.0614)
## Iteration: 20 (-469116.4626, 0.0599)
## Iteration: 30 (-469114.7849, 0.0584)
## Iteration: 40 (-469113.1861, 0.0570)
## Iteration: 50 (-469111.6601, 0.0557)
## Group probs = (0.7389, 0.2181, 0.0430)
##
## Outer iteration: 11
## Iteration: 1 (-469043.3197, 0.0610)
## Iteration: 10 (-469041.9776, 0.0546)
## Iteration: 20 (-469040.5538, 0.0534)
## Iteration: 30 (-469039.1923, 0.0523)
## Iteration: 40 (-469037.8886, 0.0512)
## Iteration: 50 (-469036.6387, 0.0501)
## Group probs = (0.7371, 0.2192, 0.0437)
##
## Outer iteration: 12
## Iteration: 1 (-467267.6146, 0.2925)
## Iteration: 10 (-467266.2969, 0.0500)
## Iteration: 20 (-467265.0176, 0.0487)
## Iteration: 30 (-467263.8101, 0.0477)
## Iteration: 40 (-467262.6619, 0.0467)
```

```
## Iteration: 50 (-467261.5654, 0.0458)
## Group probs = (0.7384, 0.2185, 0.0432)
##
## Outer iteration: 13
## Iteration: 1 (-468512.7150, 0.1907)
## Iteration: 10 (-468511.7549, 0.0449)
## Iteration: 20 (-468510.7580, 0.0442)
## Iteration: 30 (-468509.7986, 0.0434)
## Iteration: 40 (-468508.8737, 0.0426)
## Iteration: 50 (-468507.9811, 0.0419)
## Group probs = (0.7392, 0.2178, 0.0429)
##
## Outer iteration: 14
## Iteration: 1 (-469238.6902, 0.0857)
## Iteration: 10 (-469237.8890, 0.0411)
## Iteration: 20 (-469237.0534, 0.0404)
## Iteration: 30 (-469236.2462, 0.0398)
## Iteration: 40 (-469235.4651, 0.0391)
## Iteration: 50 (-469234.7087, 0.0385)
## Group probs = (0.7373, 0.2192, 0.0435)
##
## Outer iteration: 15
## Iteration: 1 (-467468.0559, 0.2019)
## Iteration: 10 (-467467.2517, 0.0385)
## Iteration: 20 (-467466.5062, 0.0376)
## Iteration: 30 (-467465.7891, 0.0370)
## Iteration: 40 (-467465.0960, 0.0364)
## Iteration: 50 (-467464.4248, 0.0359)
## Group probs = (0.7362, 0.2200, 0.0438)
##
## Outer iteration: 16
## Iteration: 1 (-466436.1908, 0.2090)
## Iteration: 10 (-466435.4568, 0.0361)
## Iteration: 20 (-466434.7515, 0.0353)
## Iteration: 30 (-466434.0800, 0.0348)
## Iteration: 40 (-466433.4360, 0.0343)
## Iteration: 50 (-466432.8157, 0.0338)
## Group probs = (0.7376, 0.2191, 0.0432)
##
## Outer iteration: 17
## Iteration: 1 (-467739.8718, 0.2452)
## Iteration: 10 (-467739.2687, 0.0332)
## Iteration: 20 (-467738.6985, 0.0328)
## Iteration: 30 (-467738.1480, 0.0323)
## Iteration: 40 (-467737.6135, 0.0319)
## Iteration: 50 (-467737.0935, 0.0315)
## Group probs = (0.7363, 0.2200, 0.0437)
##
## Outer iteration: 18
## Iteration: 1 (-466486.4950, 0.3093)
## Iteration: 10 (-466485.8489, 0.0320)
## Iteration: 20 (-466485.2673, 0.0313)
## Iteration: 30 (-466484.7206, 0.0308)
## Iteration: 40 (-466484.1990, 0.0303)
```

```
## Iteration: 50 (-466483.6977, 0.0300)
## Group probs = (0.7345, 0.2215, 0.0440)
##
## Outer iteration: 19
## Iteration: 1 (-465012.9415, 0.0303)
## Iteration: 10 (-465012.3443, 0.0301)
## Iteration: 20 (-465011.8619, 0.0294)
## Iteration: 30 (-465011.4048, 0.0289)
## Iteration: 40 (-465010.9635, 0.0286)
## Iteration: 50 (-465010.5346, 0.0282)
## Group probs = (0.7344, 0.2218, 0.0438)
##
## Outer iteration: 20
## Iteration: 1 (-464849.0851, 0.0544)
## Iteration: 10 (-464848.6720, 0.0280)
## Iteration: 20 (-464848.2476, 0.0276)
## Iteration: 30 (-464847.8377, 0.0273)
## Iteration: 40 (-464847.4396, 0.0270)
## Iteration: 50 (-464847.0517, 0.0267)
## Group probs = (0.7334, 0.2226, 0.0440)
##
## Outer iteration: 21
## Iteration: 1 (-464097.6157, 0.1578)
## Iteration: 10 (-464097.1919, 0.0269)
## Iteration: 20 (-464096.7991, 0.0264)
## Iteration: 30 (-464096.4192, 0.0261)
## Iteration: 40 (-464096.0496, 0.0258)
## Iteration: 50 (-464095.6893, 0.0255)
## Group probs = (0.7337, 0.2228, 0.0435)
##
## Outer iteration: 22
## Iteration: 1 (-464495.6312, 0.2491)
## Iteration: 10 (-464495.2080, 0.0256)
## Iteration: 20 (-464494.8202, 0.0252)
## Iteration: 30 (-464494.4643, 0.0248)
## Iteration: 40 (-464494.1278, 0.0245)
## Iteration: 50 (-464493.8046, 0.0242)
## Group probs = (0.7345, 0.2219, 0.0436)
##
## Outer iteration: 23
## Iteration: 1 (-464997.7852, 0.2039)
## Iteration: 10 (-464997.3653, 0.0242)
## Iteration: 20 (-464996.9927, 0.0240)
## Iteration: 30 (-464996.6503, 0.0237)
## Iteration: 40 (-464996.3260, 0.0235)
## Iteration: 50 (-464996.0142, 0.0232)
## Group probs = (0.7339, 0.2225, 0.0436)
##
## Outer iteration: 24
## Iteration: 1 (-464519.1563, 0.0938)
## Iteration: 10 (-464518.8696, 0.0230)
## Iteration: 20 (-464518.5814, 0.0228)
## Iteration: 30 (-464518.3009, 0.0225)
## Iteration: 40 (-464518.0266, 0.0223)
```

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## Iteration: 50 (-464517.7576, 0.0221)
## Group probs = (0.7353, 0.2215, 0.0432)
##
## Outer iteration: 25
## Iteration: 1 (-465823.8534, 0.1132)
## Iteration: 10 (-465823.5477, 0.0220)
## Iteration: 20 (-465823.2838, 0.0218)
## Iteration: 30 (-465823.0274, 0.0216)
## Iteration: 40 (-465822.7759, 0.0215)
## Iteration: 50 (-465822.5288, 0.0213)
## Group probs = (0.7352, 0.2214, 0.0434)
##
## Outer iteration: 26
## Iteration: 1 (-465609.7172, 0.1279)
## Iteration: 10 (-465609.4605, 0.0213)
## Iteration: 20 (-465609.1989, 0.0211)
## Iteration: 30 (-465608.9479, 0.0209)
## Iteration: 40 (-465608.7044, 0.0207)
## Iteration: 50 (-465608.4668, 0.0205)
## Group probs = (0.7382, 0.2193, 0.0425)
##
## Outer iteration: 27
## Iteration: 1 (-468349.8874, 0.3461)
## Iteration: 10 (-468349.4175, 0.0209)
## Iteration: 20 (-468349.1732, 0.0203)
## Iteration: 30 (-468348.9440, 0.0201)
## Iteration: 40 (-468348.7220, 0.0199)
## Iteration: 50 (-468348.5053, 0.0197)
## Group probs = (0.7368, 0.2202, 0.0430)
##
## Outer iteration: 28
## Iteration: 1 (-467104.8975, 0.0672)
## Iteration: 10 (-467104.6489, 0.0197)
## Iteration: 20 (-467104.4286, 0.0194)
## Iteration: 30 (-467104.2182, 0.0193)
## Iteration: 40 (-467104.0142, 0.0191)
## Iteration: 50 (-467103.8149, 0.0190)
## Group probs = (0.7380, 0.2192, 0.0428)
##
## Outer iteration: 29
## Iteration: 1 (-468223.9527, 0.0201)
## Iteration: 10 (-468223.7178, 0.0188)
## Iteration: 20 (-468223.5126, 0.0187)
## Iteration: 30 (-468223.3167, 0.0186)
## Iteration: 40 (-468223.1260, 0.0184)
## Iteration: 50 (-468222.9391, 0.0183)
## Group probs = (0.7361, 0.2206, 0.0432)
##
## Outer iteration: 30
## Iteration: 1 (-466500.5502, 0.0517)
## Iteration: 10 (-466500.2614, 0.0185)
## Iteration: 20 (-466500.0654, 0.0182)
## Iteration: 30 (-466499.8813, 0.0180)
## Iteration: 40 (-466499.7030, 0.0179)
```

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## Iteration: 50 (-466499.5286, 0.0177)
## Group probs = (0.7355, 0.2213, 0.0432)
##
## Outer iteration: 31
## Iteration: 1 (-466104.1081, 0.1181)
## Iteration: 10 (-466103.8189, 0.0182)
## Iteration: 20 (-466103.5802, 0.0179)
## Iteration: 30 (-466103.3728, 0.0176)
## Iteration: 40 (-466103.1831, 0.0174)
## Iteration: 50 (-466103.0045, 0.0173)
## Group probs = (0.7338, 0.2224, 0.0438)
##
## Outer iteration: 32
## Iteration: 1 (-464493.2731, 0.3914)
## Iteration: 10 (-464492.8954, 0.0182)
## Iteration: 20 (-464492.6742, 0.0175)
## Iteration: 30 (-464492.4766, 0.0172)
## Iteration: 40 (-464492.2925, 0.0170)
## Iteration: 50 (-464492.1174, 0.0168)
## Group probs = (0.7361, 0.2208, 0.0431)
##
## Outer iteration: 33
## Iteration: 1 (-466518.1719, 0.2666)
## Iteration: 10 (-466517.8744, 0.0167)
## Iteration: 20 (-466517.7150, 0.0165)
## Iteration: 30 (-466517.5634, 0.0164)
## Iteration: 40 (-466517.4150, 0.0163)
## Iteration: 50 (-466517.2688, 0.0162)
## Group probs = (0.7325, 0.2231, 0.0444)
##
## Outer iteration: 34
## Iteration: 1 (-463040.5663, 0.4878)
## Iteration: 10 (-463039.9769, 0.0187)
## Iteration: 20 (-463039.7134, 0.0172)
## Iteration: 30 (-463039.4880, 0.0167)
## Iteration: 40 (-463039.2838, 0.0164)
## Iteration: 50 (-463039.0942, 0.0162)
## Group probs = (0.7336, 0.2224, 0.0439)
##
## Outer iteration: 35
## Iteration: 1 (-464132.1337, 0.1259)
## Iteration: 10 (-464131.9523, 0.0159)
## Iteration: 20 (-464131.7838, 0.0159)
## Iteration: 30 (-464131.6226, 0.0158)
## Iteration: 40 (-464131.4667, 0.0157)
## Iteration: 50 (-464131.3153, 0.0156)
## Group probs = (0.7324, 0.2234, 0.0443)
##
## Outer iteration: 36
## Iteration: 1 (-462966.3702, 0.1938)
## Iteration: 10 (-462966.1126, 0.0166)
## Iteration: 20 (-462965.9167, 0.0160)
## Iteration: 30 (-462965.7363, 0.0158)
## Iteration: 40 (-462965.5663, 0.0156)

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## Iteration: 50 (-462965.4042, 0.0155)
## Group probs = (0.7315, 0.2242, 0.0443)
##
## Outer iteration: 37
## Iteration: 1 (-462323.5884, 0.0452)
## Iteration: 10 (-462323.3995, 0.0155)
## Iteration: 20 (-462323.2487, 0.0152)
## Iteration: 30 (-462323.1070, 0.0151)
## Iteration: 40 (-462322.9703, 0.0149)
## Iteration: 50 (-462322.8369, 0.0148)
## Group probs = (0.7325, 0.2234, 0.0441)
##
## Outer iteration: 38
## Iteration: 1 (-463088.5077, 0.1024)
## Iteration: 10 (-463088.2659, 0.0152)
## Iteration: 20 (-463088.0664, 0.0151)
## Iteration: 30 (-463087.8894, 0.0150)
## Iteration: 40 (-463087.7260, 0.0149)
## Iteration: 50 (-463087.5719, 0.0148)
## Group probs = (0.7338, 0.2226, 0.0435)
##
## Outer iteration: 39
## Iteration: 1 (-464381.0520, 0.3345)
## Iteration: 10 (-464380.8206, 0.0149)
## Iteration: 20 (-464380.6686, 0.0145)
## Iteration: 30 (-464380.5320, 0.0143)
## Iteration: 40 (-464380.4041, 0.0142)
## Iteration: 50 (-464380.2818, 0.0141)
## Group probs = (0.7335, 0.2230, 0.0435)
##
## Outer iteration: 40
## Iteration: 1 (-464097.4047, 0.0749)
## Iteration: 10 (-464097.2207, 0.0145)
## Iteration: 20 (-464097.0624, 0.0142)
## Iteration: 30 (-464096.9231, 0.0140)
## Iteration: 40 (-464096.7953, 0.0139)
## Iteration: 50 (-464096.6750, 0.0138)
## Group probs = (0.7331, 0.2231, 0.0438)
##
## Outer iteration: 1
## Iteration: 1 (-504845.5393, Inf)
## Iteration: 10 (-470957.0200, 4.8740)
## Iteration: 20 (-468484.7325, 2.1782)
## Iteration: 30 (-467661.1459, 1.3815)
## Iteration: 40 (-467246.5819, 1.0049)
## Iteration: 50 (-466996.7731, 0.7855)
## Group probs = (0.7345, 0.2209, 0.0446)
##
## Outer iteration: 2
## Iteration: 1 (-466131.4081, 0.8321)
## Iteration: 10 (-465997.9146, 0.6208)
## Iteration: 20 (-465890.5929, 0.5213)
## Iteration: 30 (-465810.3454, 0.4486)
## Iteration: 40 (-465748.2297, 0.3927)

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## Iteration: 50 (-465698.8561, 0.3485)
## Group probs = (0.7373, 0.2189, 0.0438)
##
## Outer iteration: 3
## Iteration: 1 (-468356.5153, 0.4728)
## Iteration: 10 (-468319.5962, 0.3158)
## Iteration: 20 (-468285.6176, 0.2861)
## Iteration: 30 (-468257.1822, 0.2608)
## Iteration: 40 (-468233.0766, 0.2392)
## Iteration: 50 (-468212.4168, 0.2206)
## Group probs = (0.7371, 0.2187, 0.0442)
##
## Outer iteration: 4
## Iteration: 1 (-467901.9590, 0.4006)
## Iteration: 10 (-467884.9257, 0.2072)
## Iteration: 20 (-467868.4571, 0.1931)
## Iteration: 30 (-467854.0527, 0.1805)
## Iteration: 40 (-467841.3508, 0.1694)
## Iteration: 50 (-467830.0736, 0.1594)
## Group probs = (0.7384, 0.2179, 0.0438)
##
## Outer iteration: 5
## Iteration: 1 (-469032.2046, 0.3063)
## Iteration: 10 (-469023.0019, 0.1516)
## Iteration: 20 (-469013.8248, 0.1435)
## Iteration: 30 (-469005.5512, 0.1361)
## Iteration: 40 (-468998.0571, 0.1293)
## Iteration: 50 (-468991.2409, 0.1230)
## Group probs = (0.7362, 0.2195, 0.0443)
##
## Outer iteration: 6
## Iteration: 1 (-467079.1026, 0.2006)
## Iteration: 10 (-467073.2252, 0.1187)
## Iteration: 20 (-467067.3855, 0.1131)
## Iteration: 30 (-467062.0333, 0.1081)
## Iteration: 40 (-467057.1071, 0.1036)
## Iteration: 50 (-467052.5580, 0.0995)
## Group probs = (0.7372, 0.2187, 0.0441)
##
## Outer iteration: 7
## Iteration: 1 (-467842.6291, 0.1189)
## Iteration: 10 (-467838.7348, 0.0959)
## Iteration: 20 (-467834.7396, 0.0925)
## Iteration: 30 (-467831.0266, 0.0892)
## Iteration: 40 (-467827.5663, 0.0860)
## Iteration: 50 (-467824.3342, 0.0831)
## Group probs = (0.7360, 0.2195, 0.0445)
##
## Outer iteration: 8
## Iteration: 1 (-466646.8858, 0.2965)
## Iteration: 10 (-466643.8772, 0.0813)
## Iteration: 20 (-466640.8505, 0.0785)
## Iteration: 30 (-466638.0360, 0.0760)
## Iteration: 40 (-466635.4044, 0.0737)
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```
## Iteration: 50 (-466632.9347, 0.0715)
## Group probs = (0.7346, 0.2206, 0.0447)
##
## Outer iteration: 9
## Iteration: 1 (-465478.1459, 0.0738)
## Iteration: 10 (-465475.9436, 0.0701)
## Iteration: 20 (-465473.7096, 0.0680)
## Iteration: 30 (-465471.6035, 0.0660)
## Iteration: 40 (-465469.6118, 0.0642)
## Iteration: 50 (-465467.7243, 0.0625)
## Group probs = (0.7354, 0.2204, 0.0442)
##
## Outer iteration: 10
## Iteration: 1 (-466249.5385, 0.1513)
## Iteration: 10 (-466247.9031, 0.0611)
## Iteration: 20 (-466246.1931, 0.0596)
## Iteration: 30 (-466244.5681, 0.0581)
## Iteration: 40 (-466243.0200, 0.0567)
## Iteration: 50 (-466241.5427, 0.0553)
## Group probs = (0.7340, 0.2212, 0.0447)
##
## Outer iteration: 11
## Iteration: 1 (-464902.7177, 0.2178)
## Iteration: 10 (-464901.3452, 0.0545)
## Iteration: 20 (-464899.9352, 0.0531)
## Iteration: 30 (-464898.5931, 0.0519)
## Iteration: 40 (-464897.3118, 0.0508)
## Iteration: 50 (-464896.0863, 0.0497)
## Group probs = (0.7362, 0.2197, 0.0441)
##
## Outer iteration: 12
## Iteration: 1 (-466911.9520, 0.1142)
## Iteration: 10 (-466910.7540, 0.0487)
## Iteration: 20 (-466909.5852, 0.0479)
## Iteration: 30 (-466908.4763, 0.0470)
## Iteration: 40 (-466907.4158, 0.0461)
## Iteration: 50 (-466906.3982, 0.0452)
## Group probs = (0.7384, 0.2181, 0.0435)
##
## Outer iteration: 13
## Iteration: 1 (-468768.4519, 0.1763)
## Iteration: 10 (-468767.4257, 0.0442)
## Iteration: 20 (-468766.4706, 0.0435)
## Iteration: 30 (-468765.5578, 0.0428)
## Iteration: 40 (-468764.6793, 0.0420)
## Iteration: 50 (-468763.8315, 0.0413)
## Group probs = (0.7384, 0.2179, 0.0437)
##
## Outer iteration: 14
## Iteration: 1 (-468726.5844, 0.1366)
## Iteration: 10 (-468725.7749, 0.0408)
## Iteration: 20 (-468724.9358, 0.0401)
## Iteration: 30 (-468724.1354, 0.0395)
## Iteration: 40 (-468723.3667, 0.0388)
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## Iteration: 50 (-468722.6256, 0.0382)
## Group probs = (0.7374, 0.2187, 0.0439)
##
## Outer iteration: 15
## Iteration: 1 (-467897.9557, 0.1416)
## Iteration: 10 (-467897.2315, 0.0377)
## Iteration: 20 (-467896.5235, 0.0370)
## Iteration: 30 (-467895.8505, 0.0364)
## Iteration: 40 (-467895.2036, 0.0358)
## Iteration: 50 (-467894.5785, 0.0352)
## Group probs = (0.7355, 0.2202, 0.0444)
##
## Outer iteration: 16
## Iteration: 1 (-466196.6722, 0.2034)
## Iteration: 10 (-466195.9723, 0.0352)
## Iteration: 20 (-466195.3633, 0.0344)
## Iteration: 30 (-466194.7807, 0.0339)
## Iteration: 40 (-466194.2170, 0.0334)
## Iteration: 50 (-466193.6695, 0.0329)
## Group probs = (0.7372, 0.2190, 0.0439)
##
## Outer iteration: 17
## Iteration: 1 (-467700.2055, 0.0775)
## Iteration: 10 (-467699.6331, 0.0324)
## Iteration: 20 (-467699.0915, 0.0321)
## Iteration: 30 (-467698.5719, 0.0317)
## Iteration: 40 (-467698.0686, 0.0313)
## Iteration: 50 (-467697.5791, 0.0309)
## Group probs = (0.7369, 0.2191, 0.0440)
##
## Outer iteration: 18
## Iteration: 1 (-467453.0486, 0.0620)
## Iteration: 10 (-467452.6049, 0.0306)
## Iteration: 20 (-467452.1298, 0.0302)
## Iteration: 30 (-467451.6684, 0.0298)
## Iteration: 40 (-467451.2192, 0.0295)
## Iteration: 50 (-467450.7812, 0.0291)
## Group probs = (0.7361, 0.2202, 0.0438)
##
## Outer iteration: 19
## Iteration: 1 (-466861.2144, 0.2804)
## Iteration: 10 (-466860.5161, 0.0299)
## Iteration: 20 (-466859.9490, 0.0291)
## Iteration: 30 (-466859.4598, 0.0285)
## Iteration: 40 (-466859.0144, 0.0280)
## Iteration: 50 (-466858.5972, 0.0276)
## Group probs = (0.7366, 0.2198, 0.0436)
##
## Outer iteration: 20
## Iteration: 1 (-467316.3644, 0.0295)
## Iteration: 10 (-467315.9938, 0.0272)
## Iteration: 20 (-467315.6132, 0.0269)
## Iteration: 30 (-467315.2453, 0.0265)
## Iteration: 40 (-467314.8877, 0.0262)

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## Iteration: 50 (-467314.5390, 0.0259)
## Group probs = (0.7373, 0.2190, 0.0437)
##
## Outer iteration: 21
## Iteration: 1 (-467880.5392, 0.1519)
## Iteration: 10 (-467880.1221, 0.0258)
## Iteration: 20 (-467879.7425, 0.0255)
## Iteration: 30 (-467879.3905, 0.0252)
## Iteration: 40 (-467879.0547, 0.0249)
## Iteration: 50 (-467878.7301, 0.0247)
## Group probs = (0.7358, 0.2201, 0.0441)
##
## Outer iteration: 22
## Iteration: 1 (-466471.3828, 0.0503)
## Iteration: 10 (-466470.9974, 0.0247)
## Iteration: 20 (-466470.6679, 0.0243)
## Iteration: 30 (-466470.3560, 0.0240)
## Iteration: 40 (-466470.0546, 0.0238)
## Iteration: 50 (-466469.7612, 0.0236)
## Group probs = (0.7364, 0.2194, 0.0441)
##
## Outer iteration: 23
## Iteration: 1 (-466979.3288, 0.2362)
## Iteration: 10 (-466978.8761, 0.0241)
## Iteration: 20 (-466978.4980, 0.0236)
## Iteration: 30 (-466978.1618, 0.0233)
## Iteration: 40 (-466977.8502, 0.0230)
## Iteration: 50 (-466977.5549, 0.0228)
## Group probs = (0.7361, 0.2195, 0.0444)
##
## Outer iteration: 24
## Iteration: 1 (-466610.7011, 0.1488)
## Iteration: 10 (-466610.2882, 0.0233)
## Iteration: 20 (-466609.9193, 0.0228)
## Iteration: 30 (-466609.5893, 0.0225)
## Iteration: 40 (-466609.2844, 0.0223)
## Iteration: 50 (-466608.9970, 0.0220)
## Group probs = (0.7356, 0.2200, 0.0445)
##
## Outer iteration: 25
## Iteration: 1 (-466208.8312, 0.1437)
## Iteration: 10 (-466208.4362, 0.0227)
## Iteration: 20 (-466208.1035, 0.0222)
## Iteration: 30 (-466207.7990, 0.0219)
## Iteration: 40 (-466207.5139, 0.0216)
## Iteration: 50 (-466207.2434, 0.0214)
## Group probs = (0.7363, 0.2193, 0.0445)
##
## Outer iteration: 26
## Iteration: 1 (-466652.1213, 0.1178)
## Iteration: 10 (-466651.6742, 0.0219)
## Iteration: 20 (-466651.2895, 0.0216)
## Iteration: 30 (-466650.9565, 0.0213)
## Iteration: 40 (-466650.6559, 0.0211)
```

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## Iteration: 50 (-466650.3776, 0.0208)
## Group probs = (0.7351, 0.2205, 0.0444)
##
## Outer iteration: 27
## Iteration: 1 (-465653.4082, 0.2912)
## Iteration: 10 (-465652.9422, 0.0211)
## Iteration: 20 (-465652.6332, 0.0205)
## Iteration: 30 (-465652.3715, 0.0201)
## Iteration: 40 (-465652.1342, 0.0199)
## Iteration: 50 (-465651.9116, 0.0196)
## Group probs = (0.7362, 0.2198, 0.0439)
##
## Outer iteration: 28
## Iteration: 1 (-466846.1416, 0.0938)
## Iteration: 10 (-466845.8919, 0.0197)
## Iteration: 20 (-466845.6728, 0.0194)
## Iteration: 30 (-466845.4656, 0.0192)
## Iteration: 40 (-466845.2657, 0.0190)
## Iteration: 50 (-466845.0712, 0.0189)
## Group probs = (0.7363, 0.2196, 0.0441)
##
## Outer iteration: 29
## Iteration: 1 (-466787.3575, 0.1643)
## Iteration: 10 (-466787.1338, 0.0188)
## Iteration: 20 (-466786.9203, 0.0187)
## Iteration: 30 (-466786.7200, 0.0185)
## Iteration: 40 (-466786.5278, 0.0184)
## Iteration: 50 (-466786.3413, 0.0182)
## Group probs = (0.7388, 0.2178, 0.0434)
##
## Outer iteration: 30
## Iteration: 1 (-469079.5234, 0.1985)
## Iteration: 10 (-469079.1983, 0.0182)
## Iteration: 20 (-469078.9999, 0.0180)
## Iteration: 30 (-469078.8156, 0.0178)
## Iteration: 40 (-469078.6379, 0.0177)
## Iteration: 50 (-469078.4647, 0.0176)
## Group probs = (0.7388, 0.2177, 0.0435)
##
## Outer iteration: 31
## Iteration: 1 (-469015.5837, 0.0816)
## Iteration: 10 (-469015.4028, 0.0176)
## Iteration: 20 (-469015.2318, 0.0174)
## Iteration: 30 (-469015.0658, 0.0173)
## Iteration: 40 (-469014.9036, 0.0171)
## Iteration: 50 (-469014.7444, 0.0170)
## Group probs = (0.7403, 0.2163, 0.0434)
##
## Outer iteration: 32
## Iteration: 1 (-470263.6705, 0.0516)
## Iteration: 10 (-470263.3931, 0.0170)
## Iteration: 20 (-470263.2016, 0.0169)
## Iteration: 30 (-470263.0306, 0.0167)
## Iteration: 40 (-470262.8695, 0.0166)
```

```
## Iteration: 50 (-470262.7143, 0.0165)
## Group probs = (0.7399, 0.2165, 0.0436)
##
## Outer iteration: 33
## Iteration: 1 (-469880.7651, 0.0169)
## Iteration: 10 (-469880.6212, 0.0164)
## Iteration: 20 (-469880.4734, 0.0163)
## Iteration: 30 (-469880.3286, 0.0162)
## Iteration: 40 (-469880.1859, 0.0161)
## Iteration: 50 (-469880.0450, 0.0160)
## Group probs = (0.7400, 0.2164, 0.0436)
##
## Outer iteration: 34
## Iteration: 1 (-470005.9663, 0.0461)
## Iteration: 10 (-470005.8254, 0.0160)
## Iteration: 20 (-470005.6818, 0.0159)
## Iteration: 30 (-470005.5417, 0.0158)
## Iteration: 40 (-470005.4044, 0.0157)
## Iteration: 50 (-470005.2692, 0.0156)
## Group probs = (0.7388, 0.2170, 0.0442)
##
## Outer iteration: 35
## Iteration: 1 (-468746.7715, 0.1890)
## Iteration: 10 (-468746.5646, 0.0161)
## Iteration: 20 (-468746.3964, 0.0157)
## Iteration: 30 (-468746.2412, 0.0155)
## Iteration: 40 (-468746.0944, 0.0154)
## Iteration: 50 (-468745.9534, 0.0153)
## Group probs = (0.7387, 0.2172, 0.0441)
##
## Outer iteration: 36
## Iteration: 1 (-468675.4368, 0.0645)
## Iteration: 10 (-468675.3095, 0.0152)
## Iteration: 20 (-468675.1784, 0.0151)
## Iteration: 30 (-468675.0503, 0.0150)
## Iteration: 40 (-468674.9244, 0.0149)
## Iteration: 50 (-468674.8003, 0.0148)
## Group probs = (0.7381, 0.2178, 0.0441)
##
## Outer iteration: 37
## Iteration: 1 (-468263.9075, 0.0791)
## Iteration: 10 (-468263.7296, 0.0151)
## Iteration: 20 (-468263.5824, 0.0149)
## Iteration: 30 (-468263.4499, 0.0147)
## Iteration: 40 (-468263.3249, 0.0146)
## Iteration: 50 (-468263.2045, 0.0145)
## Group probs = (0.7357, 0.2198, 0.0444)
##
## Outer iteration: 38
## Iteration: 1 (-466284.7497, 0.0498)
## Iteration: 10 (-466284.3475, 0.0153)
## Iteration: 20 (-466284.1509, 0.0147)
## Iteration: 30 (-466283.9960, 0.0145)
## Iteration: 40 (-466283.8606, 0.0143)
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## Iteration: 50 (-466283.7358, 0.0142)
## Group probs = (0.7384, 0.2177, 0.0439)
##
## Outer iteration: 39
## Iteration: 1 (-468541.7932, 0.0229)
## Iteration: 10 (-468541.3977, 0.0145)
## Iteration: 20 (-468541.2273, 0.0142)
## Iteration: 30 (-468541.0906, 0.0140)
## Iteration: 40 (-468540.9683, 0.0139)
## Iteration: 50 (-468540.8536, 0.0138)
## Group probs = (0.7390, 0.2175, 0.0435)
##
## Outer iteration: 40
## Iteration: 1 (-469165.2725, 0.2919)
## Iteration: 10 (-469165.0486, 0.0147)
## Iteration: 20 (-469164.8841, 0.0142)
## Iteration: 30 (-469164.7422, 0.0139)
## Iteration: 40 (-469164.6135, 0.0138)
## Iteration: 50 (-469164.4937, 0.0136)
## Group probs = (0.7412, 0.2159, 0.0429)
##
## Outer iteration: 1
## Iteration: 1 (-504033.1185, Inf)
## Iteration: 10 (-470235.3844, 4.8662)
## Iteration: 20 (-467778.7227, 2.1725)
## Iteration: 30 (-466963.5202, 1.3763)
## Iteration: 40 (-466554.3869, 1.0003)
## Iteration: 50 (-466308.3583, 0.7815)
## Group probs = (0.7379, 0.2183, 0.0438)
##
## Outer iteration: 2
## Iteration: 1 (-469291.9873, 0.8258)
## Iteration: 10 (-469160.6907, 0.6154)
## Iteration: 20 (-469055.6166, 0.5172)
## Iteration: 30 (-468977.0224, 0.4452)
## Iteration: 40 (-468916.1782, 0.3898)
## Iteration: 50 (-468867.8116, 0.3460)
## Group probs = (0.7366, 0.2190, 0.0444)
##
## Outer iteration: 3
## Iteration: 1 (-467677.7890, 0.4443)
## Iteration: 10 (-467641.5754, 0.3142)
## Iteration: 20 (-467608.3764, 0.2839)
## Iteration: 30 (-467580.6646, 0.2586)
## Iteration: 40 (-467557.1975, 0.2371)
## Iteration: 50 (-467537.0937, 0.2187)
## Group probs = (0.7361, 0.2192, 0.0447)
##
## Outer iteration: 4
## Iteration: 1 (-467119.5649, 0.2986)
## Iteration: 10 (-467103.3031, 0.2054)
## Iteration: 20 (-467087.5306, 0.1912)
## Iteration: 30 (-467073.6978, 0.1787)
## Iteration: 40 (-467061.4778, 0.1676)
```

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## Iteration: 50 (-467050.6139, 0.1577)
## Group probs = (0.7370, 0.2186, 0.0443)
##
## Outer iteration: 5
## Iteration: 1 (-467900.0879, 0.3597)
## Iteration: 10 (-467891.1833, 0.1498)
## Iteration: 20 (-467882.3545, 0.1418)
## Iteration: 30 (-467874.4017, 0.1344)
## Iteration: 40 (-467867.1979, 0.1277)
## Iteration: 50 (-467860.6431, 0.1216)
## Group probs = (0.7334, 0.2214, 0.0452)
##
## Outer iteration: 6
## Iteration: 1 (-464641.0296, 0.2603)
## Iteration: 10 (-464635.0676, 0.1177)
## Iteration: 20 (-464629.3951, 0.1119)
## Iteration: 30 (-464624.2155, 0.1070)
## Iteration: 40 (-464619.4525, 0.1026)
## Iteration: 50 (-464615.0542, 0.0985)
## Group probs = (0.7313, 0.2231, 0.0456)
##
## Outer iteration: 7
## Iteration: 1 (-462853.3216, 0.1394)
## Iteration: 10 (-462849.3951, 0.0957)
## Iteration: 20 (-462845.5062, 0.0919)
## Iteration: 30 (-462841.9037, 0.0885)
## Iteration: 40 (-462838.5496, 0.0853)
## Iteration: 50 (-462835.4167, 0.0824)
## Group probs = (0.7321, 0.2227, 0.0452)
##
## Outer iteration: 8
## Iteration: 1 (-463542.3715, 0.1175)
## Iteration: 10 (-463539.6721, 0.0800)
## Iteration: 20 (-463536.8756, 0.0775)
## Iteration: 30 (-463534.2502, 0.0751)
## Iteration: 40 (-463531.7793, 0.0728)
## Iteration: 50 (-463529.4491, 0.0707)
## Group probs = (0.7341, 0.2213, 0.0446)
##
## Outer iteration: 9
## Iteration: 1 (-465361.5165, 0.1880)
## Iteration: 10 (-465359.4354, 0.0687)
## Iteration: 20 (-465357.3381, 0.0669)
## Iteration: 30 (-465355.3542, 0.0651)
## Iteration: 40 (-465353.4720, 0.0634)
## Iteration: 50 (-465351.6832, 0.0618)
## Group probs = (0.7372, 0.2191, 0.0437)
##
## Outer iteration: 10
## Iteration: 1 (-468083.8515, 0.2989)
## Iteration: 10 (-468082.0306, 0.0602)
## Iteration: 20 (-468080.3953, 0.0587)
## Iteration: 30 (-468078.8466, 0.0573)
## Iteration: 40 (-468077.3704, 0.0560)
```

```
## Iteration: 50 (-468075.9600, 0.0547)
## Group probs = (0.7377, 0.2183, 0.0440)
##
## Outer iteration: 11
## Iteration: 1 (-468406.5075, 0.2337)
## Iteration: 10 (-468405.0829, 0.0538)
## Iteration: 20 (-468403.6712, 0.0526)
## Iteration: 30 (-468402.3540, 0.0515)
## Iteration: 40 (-468401.1075, 0.0504)
## Iteration: 50 (-468399.9198, 0.0494)
## Group probs = (0.7382, 0.2183, 0.0435)
##
## Outer iteration: 12
## Iteration: 1 (-469074.1237, 0.4483)
## Iteration: 10 (-469072.8186, 0.0493)
## Iteration: 20 (-469071.6091, 0.0479)
## Iteration: 30 (-469070.5039, 0.0468)
## Iteration: 40 (-469069.4693, 0.0458)
## Iteration: 50 (-469068.4886, 0.0448)
## Group probs = (0.7349, 0.2204, 0.0447)
##
## Outer iteration: 13
## Iteration: 1 (-465925.0276, 0.4631)
## Iteration: 10 (-465923.9039, 0.0444)
## Iteration: 20 (-465922.9770, 0.0432)
## Iteration: 30 (-465922.0933, 0.0424)
## Iteration: 40 (-465921.2435, 0.0416)
## Iteration: 50 (-465920.4238, 0.0409)
## Group probs = (0.7352, 0.2202, 0.0446)
##
## Outer iteration: 14
## Iteration: 1 (-466213.2721, 0.0844)
## Iteration: 10 (-466212.4947, 0.0405)
## Iteration: 20 (-466211.6855, 0.0398)
## Iteration: 30 (-466210.9130, 0.0392)
## Iteration: 40 (-466210.1707, 0.0386)
## Iteration: 50 (-466209.4547, 0.0380)
## Group probs = (0.7340, 0.2211, 0.0449)
##
## Outer iteration: 15
## Iteration: 1 (-465138.5241, 0.2274)
## Iteration: 10 (-465137.7029, 0.0382)
## Iteration: 20 (-465136.9494, 0.0374)
## Iteration: 30 (-465136.2399, 0.0367)
## Iteration: 40 (-465135.5637, 0.0362)
## Iteration: 50 (-465134.9151, 0.0356)
## Group probs = (0.7339, 0.2211, 0.0450)
##
## Outer iteration: 16
## Iteration: 1 (-465005.9656, 0.1373)
## Iteration: 10 (-465005.2843, 0.0356)
## Iteration: 20 (-465004.6027, 0.0350)
## Iteration: 30 (-465003.9629, 0.0345)
## Iteration: 40 (-465003.3547, 0.0339)
```

```
## Iteration: 50 (-465002.7719, 0.0335)
## Group probs = (0.7317, 0.2228, 0.0455)
##
## Outer iteration: 17
## Iteration: 1 (-462985.5577, 0.1297)
## Iteration: 10 (-462984.8964, 0.0336)
## Iteration: 20 (-462984.3268, 0.0328)
## Iteration: 30 (-462983.7831, 0.0323)
## Iteration: 40 (-462983.2587, 0.0318)
## Iteration: 50 (-462982.7509, 0.0314)
## Group probs = (0.7334, 0.2216, 0.0450)
##
## Outer iteration: 18
## Iteration: 1 (-464532.8252, 0.1755)
## Iteration: 10 (-464532.3099, 0.0308)
## Iteration: 20 (-464531.8345, 0.0305)
## Iteration: 30 (-464531.3736, 0.0302)
## Iteration: 40 (-464530.9245, 0.0298)
## Iteration: 50 (-464530.4864, 0.0294)
## Group probs = (0.7329, 0.2221, 0.0450)
##
## Outer iteration: 19
## Iteration: 1 (-464130.9253, 0.0294)
## Iteration: 10 (-464130.5233, 0.0292)
## Iteration: 20 (-464130.0999, 0.0289)
## Iteration: 30 (-464129.6879, 0.0285)
## Iteration: 40 (-464129.2857, 0.0282)
## Iteration: 50 (-464128.8925, 0.0279)
## Group probs = (0.7332, 0.2219, 0.0449)
##
## Outer iteration: 20
## Iteration: 1 (-464375.8837, 0.0287)
## Iteration: 10 (-464375.5329, 0.0276)
## Iteration: 20 (-464375.1536, 0.0273)
## Iteration: 30 (-464374.7826, 0.0270)
## Iteration: 40 (-464374.4195, 0.0267)
## Iteration: 50 (-464374.0637, 0.0264)
## Group probs = (0.7356, 0.2202, 0.0442)
##
## Outer iteration: 21
## Iteration: 1 (-466547.6259, 0.1786)
## Iteration: 10 (-466547.1509, 0.0262)
## Iteration: 20 (-466546.7936, 0.0259)
## Iteration: 30 (-466546.4524, 0.0257)
## Iteration: 40 (-466546.1206, 0.0254)
## Iteration: 50 (-466545.7963, 0.0252)
## Group probs = (0.7374, 0.2187, 0.0440)
##
## Outer iteration: 22
## Iteration: 1 (-468052.3447, 0.0558)
## Iteration: 10 (-468051.9162, 0.0249)
## Iteration: 20 (-468051.5780, 0.0247)
## Iteration: 30 (-468051.2603, 0.0244)
## Iteration: 40 (-468050.9539, 0.0242)
```

```
## Iteration: 50 (-468050.6556, 0.0240)
## Group probs = (0.7362, 0.2194, 0.0444)
##
## Outer iteration: 23
## Iteration: 1 (-466987.5726, 0.0265)
## Iteration: 10 (-466987.2722, 0.0238)
## Iteration: 20 (-466986.9814, 0.0236)
## Iteration: 30 (-466986.6992, 0.0233)
## Iteration: 40 (-466986.4232, 0.0231)
## Iteration: 50 (-466986.1526, 0.0229)
## Group probs = (0.7350, 0.2203, 0.0448)
##
## Outer iteration: 24
## Iteration: 1 (-465780.0189, 0.1434)
## Iteration: 10 (-465779.7279, 0.0229)
## Iteration: 20 (-465779.4560, 0.0226)
## Iteration: 30 (-465779.1915, 0.0224)
## Iteration: 40 (-465778.9326, 0.0222)
## Iteration: 50 (-465778.6788, 0.0220)
## Group probs = (0.7353, 0.2201, 0.0446)
##
## Outer iteration: 25
## Iteration: 1 (-466108.7158, 0.0220)
## Iteration: 10 (-466108.4839, 0.0219)
## Iteration: 20 (-466108.2356, 0.0217)
## Iteration: 30 (-466107.9925, 0.0215)
## Iteration: 40 (-466107.7539, 0.0213)
## Iteration: 50 (-466107.5194, 0.0212)
## Group probs = (0.7378, 0.2183, 0.0439)
##
## Outer iteration: 26
## Iteration: 1 (-468417.6456, 0.2520)
## Iteration: 10 (-468417.2455, 0.0213)
## Iteration: 20 (-468417.0067, 0.0209)
## Iteration: 30 (-468416.7790, 0.0207)
## Iteration: 40 (-468416.5571, 0.0205)
## Iteration: 50 (-468416.3394, 0.0204)
## Group probs = (0.7347, 0.2204, 0.0449)
##
## Outer iteration: 27
## Iteration: 1 (-465557.7385, 0.3219)
## Iteration: 10 (-465557.3001, 0.0210)
## Iteration: 20 (-465557.0680, 0.0203)
## Iteration: 30 (-465556.8492, 0.0200)
## Iteration: 40 (-465556.6369, 0.0198)
## Iteration: 50 (-465556.4294, 0.0197)
## Group probs = (0.7363, 0.2196, 0.0441)
##
## Outer iteration: 28
## Iteration: 1 (-467188.9106, 0.3556)
## Iteration: 10 (-467188.5602, 0.0204)
## Iteration: 20 (-467188.2930, 0.0198)
## Iteration: 30 (-467188.0563, 0.0195)
## Iteration: 40 (-467187.8375, 0.0193)
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## Iteration: 50 (-467187.6304, 0.0191)
## Group probs = (0.7334, 0.2215, 0.0451)
##
## Outer iteration: 29
## Iteration: 1 (-464458.7788, 0.4095)
## Iteration: 10 (-464458.3908, 0.0196)
## Iteration: 20 (-464458.1843, 0.0189)
## Iteration: 30 (-464457.9898, 0.0187)
## Iteration: 40 (-464457.8016, 0.0185)
## Iteration: 50 (-464457.6178, 0.0184)
## Group probs = (0.7357, 0.2202, 0.0442)
##
## Outer iteration: 30
## Iteration: 1 (-466656.5278, 0.4246)
## Iteration: 10 (-466656.1331, 0.0194)
## Iteration: 20 (-466655.8886, 0.0186)
## Iteration: 30 (-466655.6739, 0.0183)
## Iteration: 40 (-466655.4763, 0.0181)
## Iteration: 50 (-466655.2900, 0.0179)
## Group probs = (0.7378, 0.2189, 0.0433)
##
## Outer iteration: 31
## Iteration: 1 (-468661.9417, 0.4247)
## Iteration: 10 (-468661.2626, 0.0210)
## Iteration: 20 (-468660.8698, 0.0194)
## Iteration: 30 (-468660.5545, 0.0187)
## Iteration: 40 (-468660.2870, 0.0183)
## Iteration: 50 (-468660.0515, 0.0180)
## Group probs = (0.7355, 0.2202, 0.0443)
##
## Outer iteration: 32
## Iteration: 1 (-466498.6047, 0.4513)
## Iteration: 10 (-466498.2906, 0.0176)
## Iteration: 20 (-466498.1173, 0.0171)
## Iteration: 30 (-466497.9564, 0.0169)
## Iteration: 40 (-466497.8020, 0.0168)
## Iteration: 50 (-466497.6516, 0.0167)
## Group probs = (0.7354, 0.2203, 0.0443)
##
## Outer iteration: 33
## Iteration: 1 (-466403.7975, 0.0858)
## Iteration: 10 (-466403.6517, 0.0166)
## Iteration: 20 (-466403.5016, 0.0165)
## Iteration: 30 (-466403.3555, 0.0164)
## Iteration: 40 (-466403.2123, 0.0163)
## Iteration: 50 (-466403.0715, 0.0162)
## Group probs = (0.7377, 0.2187, 0.0435)
##
## Outer iteration: 34
## Iteration: 1 (-468620.9307, 0.2438)
## Iteration: 10 (-468620.6395, 0.0167)
## Iteration: 20 (-468620.4755, 0.0162)
## Iteration: 30 (-468620.3226, 0.0161)
## Iteration: 40 (-468620.1759, 0.0159)

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```
## Iteration: 50 (-468620.0339, 0.0158)
## Group probs = (0.7378, 0.2184, 0.0439)
##
## Outer iteration: 35
## Iteration: 1 (-468489.8447, 0.2355)
## Iteration: 10 (-468489.5958, 0.0161)
## Iteration: 20 (-468489.4018, 0.0158)
## Iteration: 30 (-468489.2373, 0.0156)
## Iteration: 40 (-468489.0888, 0.0155)
## Iteration: 50 (-468488.9498, 0.0154)
## Group probs = (0.7367, 0.2188, 0.0444)
##
## Outer iteration: 36
## Iteration: 1 (-467481.4676, 0.3611)
## Iteration: 10 (-467480.9022, 0.0180)
## Iteration: 20 (-467480.5468, 0.0168)
## Iteration: 30 (-467480.2752, 0.0162)
## Iteration: 40 (-467480.0531, 0.0158)
## Iteration: 50 (-467479.8624, 0.0156)
## Group probs = (0.7377, 0.2182, 0.0442)
##
## Outer iteration: 37
## Iteration: 1 (-468273.8954, 0.1618)
## Iteration: 10 (-468273.7392, 0.0150)
## Iteration: 20 (-468273.6057, 0.0149)
## Iteration: 30 (-468273.4781, 0.0148)
## Iteration: 40 (-468273.3544, 0.0147)
## Iteration: 50 (-468273.2336, 0.0147)
## Group probs = (0.7375, 0.2184, 0.0441)
##
## Outer iteration: 38
## Iteration: 1 (-468098.6453, 0.1167)
## Iteration: 10 (-468098.5030, 0.0147)
## Iteration: 20 (-468098.3752, 0.0145)
## Iteration: 30 (-468098.2552, 0.0144)
## Iteration: 40 (-468098.1396, 0.0143)
## Iteration: 50 (-468098.0269, 0.0143)
## Group probs = (0.7384, 0.2179, 0.0437)
##
## Outer iteration: 39
## Iteration: 1 (-468945.6877, 0.2418)
## Iteration: 10 (-468945.4214, 0.0153)
## Iteration: 20 (-468945.2402, 0.0147)
## Iteration: 30 (-468945.0868, 0.0144)
## Iteration: 40 (-468944.9499, 0.0143)
## Iteration: 50 (-468944.8235, 0.0141)
## Group probs = (0.7358, 0.2196, 0.0446)
##
## Outer iteration: 40
## Iteration: 1 (-466647.5407, 0.3275)
## Iteration: 10 (-466647.2712, 0.0145)
## Iteration: 20 (-466647.1546, 0.0139)
## Iteration: 30 (-466647.0457, 0.0138)
## Iteration: 40 (-466646.9401, 0.0137)
```

```

## Iteration: 50 (-466646.8365, 0.0136)
## Group probs = (0.7349, 0.2203, 0.0449)
##
## Outer iteration: 1
## Iteration: 1 (-503969.8449,   Inf)
## Iteration: 10 (-470285.6175, 4.8569)
## Iteration: 20 (-467843.3988, 2.1640)
## Iteration: 30 (-467036.0390, 1.3690)
## Iteration: 40 (-466632.0541, 0.9940)
## Iteration: 50 (-466389.7424, 0.7760)
## Group probs = (0.7391, 0.2170, 0.0439)
##
## Outer iteration: 2
## Iteration: 1 (-470894.3554, 0.9600)
## Iteration: 10 (-470765.3633, 0.6099)
## Iteration: 20 (-470662.7463, 0.5122)
## Iteration: 30 (-470586.1542, 0.4406)
## Iteration: 40 (-470526.9732, 0.3856)
## Iteration: 50 (-470480.0111, 0.3421)
## Group probs = (0.7364, 0.2184, 0.0451)
##
## Outer iteration: 3
## Iteration: 1 (-467918.7077, 0.4308)
## Iteration: 10 (-467883.2321, 0.3110)
## Iteration: 20 (-467850.6262, 0.2811)
## Iteration: 30 (-467823.4131, 0.2561)
## Iteration: 40 (-467800.3946, 0.2348)
## Iteration: 50 (-467780.7035, 0.2166)
## Group probs = (0.7366, 0.2181, 0.0453)
##
## Outer iteration: 4
## Iteration: 1 (-467842.3963, 0.2292)
## Iteration: 10 (-467826.5054, 0.2032)
## Iteration: 20 (-467811.0833, 0.1893)
## Iteration: 30 (-467797.5824, 0.1769)
## Iteration: 40 (-467785.6755, 0.1659)
## Iteration: 50 (-467775.1059, 0.1560)
## Group probs = (0.7359, 0.2186, 0.0455)
##
## Outer iteration: 5
## Iteration: 1 (-467209.1513, 0.1562)
## Iteration: 10 (-467200.3902, 0.1487)
## Iteration: 20 (-467191.6640, 0.1407)
## Iteration: 30 (-467183.8092, 0.1333)
## Iteration: 40 (-467176.7046, 0.1267)
## Iteration: 50 (-467170.2510, 0.1206)
## Group probs = (0.7357, 0.2189, 0.0454)
##
## Outer iteration: 6
## Iteration: 1 (-467027.2693, 0.1204)
## Iteration: 10 (-467021.8266, 0.1161)
## Iteration: 20 (-467016.3021, 0.1110)
## Iteration: 30 (-467011.2376, 0.1062)
## Iteration: 40 (-467006.5783, 0.1017)

```

```
## Iteration: 50 (-467002.2782, 0.0976)
## Group probs = (0.7348, 0.2194, 0.0457)
##
## Outer iteration: 7
## Iteration: 1 (-466097.4047, 0.2353)
## Iteration: 10 (-466093.5930, 0.0948)
## Iteration: 20 (-466089.7236, 0.0911)
## Iteration: 30 (-466086.1457, 0.0877)
## Iteration: 40 (-466082.8234, 0.0847)
## Iteration: 50 (-466079.7282, 0.0818)
## Group probs = (0.7338, 0.2202, 0.0460)
##
## Outer iteration: 8
## Iteration: 1 (-465188.8364, 0.1626)
## Iteration: 10 (-465186.0416, 0.0801)
## Iteration: 20 (-465183.2024, 0.0774)
## Iteration: 30 (-465180.5524, 0.0749)
## Iteration: 40 (-465178.0700, 0.0726)
## Iteration: 50 (-465175.7383, 0.0704)
## Group probs = (0.7350, 0.2193, 0.0457)
##
## Outer iteration: 9
## Iteration: 1 (-466196.3238, 0.0902)
## Iteration: 10 (-466194.1263, 0.0688)
## Iteration: 20 (-466191.9095, 0.0669)
## Iteration: 30 (-466189.8468, 0.0651)
## Iteration: 40 (-466187.9111, 0.0633)
## Iteration: 50 (-466186.0857, 0.0617)
## Group probs = (0.7371, 0.2179, 0.0450)
##
## Outer iteration: 10
## Iteration: 1 (-468013.9258, 0.2847)
## Iteration: 10 (-468012.2739, 0.0599)
## Iteration: 20 (-468010.6520, 0.0586)
## Iteration: 30 (-468009.1121, 0.0571)
## Iteration: 40 (-468007.6449, 0.0558)
## Iteration: 50 (-468006.2446, 0.0545)
## Group probs = (0.7356, 0.2191, 0.0453)
##
## Outer iteration: 11
## Iteration: 1 (-466805.0928, 0.0711)
## Iteration: 10 (-466803.7638, 0.0536)
## Iteration: 20 (-466802.4533, 0.0522)
## Iteration: 30 (-466801.2170, 0.0510)
## Iteration: 40 (-466800.0399, 0.0498)
## Iteration: 50 (-466798.9143, 0.0487)
## Group probs = (0.7347, 0.2197, 0.0456)
##
## Outer iteration: 12
## Iteration: 1 (-465973.4980, 0.1854)
## Iteration: 10 (-465972.4687, 0.0480)
## Iteration: 20 (-465971.4029, 0.0470)
## Iteration: 30 (-465970.3806, 0.0460)
## Iteration: 40 (-465969.3980, 0.0451)
```

```
## Iteration: 50 (-465968.4525, 0.0443)
## Group probs = (0.7347, 0.2197, 0.0456)
##
## Outer iteration: 13
## Iteration: 1 (-465881.0969, 0.0863)
## Iteration: 10 (-465880.2347, 0.0436)
## Iteration: 20 (-465879.3228, 0.0428)
## Iteration: 30 (-465878.4494, 0.0421)
## Iteration: 40 (-465877.6099, 0.0413)
## Iteration: 50 (-465876.8012, 0.0406)
## Group probs = (0.7369, 0.2180, 0.0450)
##
## Outer iteration: 14
## Iteration: 1 (-467893.9946, 0.1887)
## Iteration: 10 (-467893.1601, 0.0398)
## Iteration: 20 (-467892.4010, 0.0392)
## Iteration: 30 (-467891.6732, 0.0386)
## Iteration: 40 (-467890.9702, 0.0380)
## Iteration: 50 (-467890.2894, 0.0374)
## Group probs = (0.7343, 0.2202, 0.0455)
##
## Outer iteration: 15
## Iteration: 1 (-465649.9475, 0.0695)
## Iteration: 10 (-465649.0922, 0.0374)
## Iteration: 20 (-465648.4106, 0.0365)
## Iteration: 30 (-465647.7720, 0.0359)
## Iteration: 40 (-465647.1602, 0.0353)
## Iteration: 50 (-465646.5692, 0.0347)
## Group probs = (0.7331, 0.2212, 0.0457)
##
## Outer iteration: 16
## Iteration: 1 (-464605.4254, 0.1368)
## Iteration: 10 (-464604.8323, 0.0346)
## Iteration: 20 (-464604.2635, 0.0339)
## Iteration: 30 (-464603.7138, 0.0334)
## Iteration: 40 (-464603.1799, 0.0329)
## Iteration: 50 (-464602.6606, 0.0325)
## Group probs = (0.7311, 0.2226, 0.0462)
##
## Outer iteration: 17
## Iteration: 1 (-462733.3323, 0.2367)
## Iteration: 10 (-462732.7398, 0.0326)
## Iteration: 20 (-462732.2089, 0.0319)
## Iteration: 30 (-462731.6999, 0.0314)
## Iteration: 40 (-462731.2084, 0.0310)
## Iteration: 50 (-462730.7322, 0.0306)
## Group probs = (0.7324, 0.2217, 0.0459)
##
## Outer iteration: 18
## Iteration: 1 (-463929.3774, 0.0608)
## Iteration: 10 (-463928.8107, 0.0306)
## Iteration: 20 (-463928.2837, 0.0302)
## Iteration: 30 (-463927.7962, 0.0298)
## Iteration: 40 (-463927.3344, 0.0294)
```

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## Iteration: 50 (-463926.8921, 0.0290)
## Group probs = (0.7334, 0.2212, 0.0454)
##
## Outer iteration: 19
## Iteration: 1 (-464877.2989, 0.3066)
## Iteration: 10 (-464876.8419, 0.0288)
## Iteration: 20 (-464876.4212, 0.0283)
## Iteration: 30 (-464876.0219, 0.0279)
## Iteration: 40 (-464875.6371, 0.0276)
## Iteration: 50 (-464875.2636, 0.0272)
## Group probs = (0.7316, 0.2225, 0.0459)
##
## Outer iteration: 20
## Iteration: 1 (-463154.6506, 0.1051)
## Iteration: 10 (-463154.2298, 0.0271)
## Iteration: 20 (-463153.8499, 0.0267)
## Iteration: 30 (-463153.4888, 0.0263)
## Iteration: 40 (-463153.1401, 0.0260)
## Iteration: 50 (-463152.8013, 0.0257)
## Group probs = (0.7332, 0.2214, 0.0453)
##
## Outer iteration: 21
## Iteration: 1 (-464673.0662, 0.1274)
## Iteration: 10 (-464672.7119, 0.0255)
## Iteration: 20 (-464672.3881, 0.0252)
## Iteration: 30 (-464672.0737, 0.0249)
## Iteration: 40 (-464671.7663, 0.0247)
## Iteration: 50 (-464671.4650, 0.0244)
## Group probs = (0.7344, 0.2206, 0.0450)
##
## Outer iteration: 22
## Iteration: 1 (-465815.6496, 0.1561)
## Iteration: 10 (-465815.3233, 0.0244)
## Iteration: 20 (-465815.0177, 0.0241)
## Iteration: 30 (-465814.7231, 0.0238)
## Iteration: 40 (-465814.4370, 0.0235)
## Iteration: 50 (-465814.1580, 0.0233)
## Group probs = (0.7340, 0.2207, 0.0453)
##
## Outer iteration: 23
## Iteration: 1 (-465318.0465, 0.1781)
## Iteration: 10 (-465317.7610, 0.0232)
## Iteration: 20 (-465317.4782, 0.0229)
## Iteration: 30 (-465317.2076, 0.0227)
## Iteration: 40 (-465316.9452, 0.0225)
## Iteration: 50 (-465316.6892, 0.0223)
## Group probs = (0.7349, 0.2200, 0.0451)
##
## Outer iteration: 24
## Iteration: 1 (-466220.0362, 0.0409)
## Iteration: 10 (-466219.7618, 0.0221)
## Iteration: 20 (-466219.4976, 0.0220)
## Iteration: 30 (-466219.2442, 0.0218)
## Iteration: 40 (-466218.9982, 0.0216)

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## Iteration: 50 (-466218.7582, 0.0214)
## Group probs = (0.7323, 0.2220, 0.0457)
##
## Outer iteration: 25
## Iteration: 1 (-463779.4188, 0.1062)
## Iteration: 10 (-463779.0096, 0.0217)
## Iteration: 20 (-463778.7598, 0.0212)
## Iteration: 30 (-463778.5265, 0.0209)
## Iteration: 40 (-463778.3010, 0.0208)
## Iteration: 50 (-463778.0810, 0.0206)
## Group probs = (0.7330, 0.2213, 0.0457)
##
## Outer iteration: 26
## Iteration: 1 (-464429.3228, 0.1831)
## Iteration: 10 (-464428.9730, 0.0211)
## Iteration: 20 (-464428.6777, 0.0208)
## Iteration: 30 (-464428.4158, 0.0205)
## Iteration: 40 (-464428.1736, 0.0203)
## Iteration: 50 (-464427.9443, 0.0201)
## Group probs = (0.7308, 0.2231, 0.0461)
##
## Outer iteration: 27
## Iteration: 1 (-462419.2236, 0.0799)
## Iteration: 10 (-462418.8587, 0.0204)
## Iteration: 20 (-462418.6377, 0.0198)
## Iteration: 30 (-462418.4307, 0.0196)
## Iteration: 40 (-462418.2303, 0.0194)
## Iteration: 50 (-462418.0345, 0.0192)
## Group probs = (0.7317, 0.2226, 0.0458)
##
## Outer iteration: 28
## Iteration: 1 (-463243.4480, 0.1078)
## Iteration: 10 (-463243.2559, 0.0190)
## Iteration: 20 (-463243.0667, 0.0189)
## Iteration: 30 (-463242.8814, 0.0188)
## Iteration: 40 (-463242.6992, 0.0186)
## Iteration: 50 (-463242.5199, 0.0185)
## Group probs = (0.7324, 0.2220, 0.0456)
##
## Outer iteration: 29
## Iteration: 1 (-463941.6908, 0.0414)
## Iteration: 10 (-463941.5111, 0.0183)
## Iteration: 20 (-463941.3359, 0.0182)
## Iteration: 30 (-463941.1640, 0.0181)
## Iteration: 40 (-463940.9945, 0.0180)
## Iteration: 50 (-463940.8273, 0.0179)
## Group probs = (0.7311, 0.2230, 0.0459)
##
## Outer iteration: 30
## Iteration: 1 (-462756.0372, 0.0969)
## Iteration: 10 (-462755.8283, 0.0180)
## Iteration: 20 (-462755.6599, 0.0177)
## Iteration: 30 (-462755.4962, 0.0176)
## Iteration: 40 (-462755.3352, 0.0174)

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## Iteration: 50 (-462755.1767, 0.0173)
## Group probs = (0.7329, 0.2220, 0.0451)
##
## Outer iteration: 31
## Iteration: 1 (-464462.0869, 0.3862)
## Iteration: 10 (-464461.7005, 0.0187)
## Iteration: 20 (-464461.4592, 0.0179)
## Iteration: 30 (-464461.2530, 0.0175)
## Iteration: 40 (-464461.0671, 0.0172)
## Iteration: 50 (-464460.8943, 0.0170)
## Group probs = (0.7341, 0.2209, 0.0450)
##
## Outer iteration: 32
## Iteration: 1 (-465475.3303, 0.1576)
## Iteration: 10 (-465475.0629, 0.0169)
## Iteration: 20 (-465474.8790, 0.0167)
## Iteration: 30 (-465474.7173, 0.0165)
## Iteration: 40 (-465474.5661, 0.0164)
## Iteration: 50 (-465474.4208, 0.0162)
## Group probs = (0.7351, 0.2199, 0.0450)
##
## Outer iteration: 33
## Iteration: 1 (-466247.2993, 0.0339)
## Iteration: 10 (-466247.0417, 0.0164)
## Iteration: 20 (-466246.8567, 0.0162)
## Iteration: 30 (-466246.6968, 0.0160)
## Iteration: 40 (-466246.5493, 0.0159)
## Iteration: 50 (-466246.4089, 0.0158)
## Group probs = (0.7365, 0.2188, 0.0447)
##
## Outer iteration: 34
## Iteration: 1 (-467519.7731, 0.2225)
## Iteration: 10 (-467519.5797, 0.0159)
## Iteration: 20 (-467519.4426, 0.0156)
## Iteration: 30 (-467519.3103, 0.0155)
## Iteration: 40 (-467519.1809, 0.0154)
## Iteration: 50 (-467519.0537, 0.0153)
## Group probs = (0.7333, 0.2209, 0.0458)
##
## Outer iteration: 35
## Iteration: 1 (-464613.3170, 0.4772)
## Iteration: 10 (-464612.7772, 0.0174)
## Iteration: 20 (-464612.5687, 0.0161)
## Iteration: 30 (-464612.3930, 0.0157)
## Iteration: 40 (-464612.2349, 0.0154)
## Iteration: 50 (-464612.0884, 0.0152)
## Group probs = (0.7344, 0.2202, 0.0454)
##
## Outer iteration: 36
## Iteration: 1 (-465559.4592, 0.2551)
## Iteration: 10 (-465559.2781, 0.0151)
## Iteration: 20 (-465559.1512, 0.0148)
## Iteration: 30 (-465559.0308, 0.0147)
## Iteration: 40 (-465558.9137, 0.0146)
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```

## Iteration: 50 (-465558.7989, 0.0145)
## Group probs = (0.7342, 0.2206, 0.0452)
##
## Outer iteration: 37
## Iteration: 1 (-465462.2278, 0.1307)
## Iteration: 10 (-465462.0457, 0.0150)
## Iteration: 20 (-465461.8895, 0.0147)
## Iteration: 30 (-465461.7523, 0.0145)
## Iteration: 40 (-465461.6260, 0.0144)
## Iteration: 50 (-465461.5067, 0.0143)
## Group probs = (0.7335, 0.2209, 0.0456)
##
## Outer iteration: 38
## Iteration: 1 (-464768.1139, 0.1990)
## Iteration: 10 (-464767.9824, 0.0143)
## Iteration: 20 (-464767.8653, 0.0141)
## Iteration: 30 (-464767.7538, 0.0140)
## Iteration: 40 (-464767.6457, 0.0139)
## Iteration: 50 (-464767.5399, 0.0138)
## Group probs = (0.7342, 0.2207, 0.0451)
##
## Outer iteration: 39
## Iteration: 1 (-465532.5553, 0.2606)
## Iteration: 10 (-465532.3415, 0.0147)
## Iteration: 20 (-465532.1776, 0.0142)
## Iteration: 30 (-465532.0394, 0.0139)
## Iteration: 40 (-465531.9157, 0.0138)
## Iteration: 50 (-465531.8009, 0.0136)
## Group probs = (0.7317, 0.2224, 0.0459)
##
## Outer iteration: 40
## Iteration: 1 (-463265.4905, 0.3069)
## Iteration: 10 (-463265.2477, 0.0140)
## Iteration: 20 (-463265.1407, 0.0135)
## Iteration: 30 (-463265.0402, 0.0133)
## Iteration: 40 (-463264.9423, 0.0132)
## Iteration: 50 (-463264.8462, 0.0132)
## Group probs = (0.7321, 0.2224, 0.0455)
##
## CCES_2017
## Outer iteration: 1
## Iteration: 1 (-153415.3628, Inf)
## Iteration: 10 (-138651.0160, 2.6382)
## Iteration: 20 (-137467.8578, 1.1395)
## Iteration: 30 (-137080.3807, 0.6952)
## Iteration: 40 (-136896.8680, 0.4869)
## Iteration: 50 (-136792.8698, 0.3684)
## Group probs = (0.8187, 0.1335, 0.0478)
##
## Outer iteration: 2
## Iteration: 1 (-137425.8846, 0.5469)
## Iteration: 10 (-137374.4916, 0.2811)
## Iteration: 20 (-137335.0697, 0.2309)
## Iteration: 30 (-137306.5149, 0.1953)

```

```
## Iteration: 40 (-137284.8297, 0.1690)
## Iteration: 50 (-137267.7578, 0.1488)
## Group probs = (0.8186, 0.1339, 0.0475)
##
## Outer iteration: 3
## Iteration: 1 (-137233.0887, 0.1470)
## Iteration: 10 (-137220.2692, 0.1346)
## Iteration: 20 (-137208.5056, 0.1213)
## Iteration: 30 (-137198.6641, 0.1104)
## Iteration: 40 (-137190.2930, 0.1013)
## Iteration: 50 (-137183.0779, 0.0936)
## Group probs = (0.8192, 0.1333, 0.0475)
##
## Outer iteration: 4
## Iteration: 1 (-137300.4901, 0.1060)
## Iteration: 10 (-137294.6237, 0.0875)
## Iteration: 20 (-137288.8835, 0.0820)
## Iteration: 30 (-137283.8077, 0.0770)
## Iteration: 40 (-137279.2864, 0.0726)
## Iteration: 50 (-137275.2340, 0.0686)
## Group probs = (0.8173, 0.1350, 0.0477)
##
## Outer iteration: 5
## Iteration: 1 (-136765.5720, 0.0766)
## Iteration: 10 (-136762.0593, 0.0659)
## Iteration: 20 (-136758.5834, 0.0627)
## Iteration: 30 (-136755.4324, 0.0598)
## Iteration: 40 (-136752.5610, 0.0571)
## Iteration: 50 (-136749.9335, 0.0546)
## Group probs = (0.8175, 0.1347, 0.0478)
##
## Outer iteration: 6
## Iteration: 1 (-136773.0554, 0.0890)
## Iteration: 10 (-136770.7768, 0.0526)
## Iteration: 20 (-136768.4551, 0.0506)
## Iteration: 30 (-136766.3162, 0.0487)
## Iteration: 40 (-136764.3380, 0.0469)
## Iteration: 50 (-136762.5027, 0.0452)
## Group probs = (0.8181, 0.1346, 0.0473)
##
## Outer iteration: 7
## Iteration: 1 (-136950.3070, 0.0469)
## Iteration: 10 (-136948.6687, 0.0436)
## Iteration: 20 (-136946.9852, 0.0425)
## Iteration: 30 (-136945.4183, 0.0412)
## Iteration: 40 (-136943.9544, 0.0400)
## Iteration: 50 (-136942.5830, 0.0388)
## Group probs = (0.8177, 0.1348, 0.0475)
##
## Outer iteration: 8
## Iteration: 1 (-136807.9564, 0.0659)
## Iteration: 10 (-136806.7416, 0.0376)
## Iteration: 20 (-136805.4855, 0.0367)
## Iteration: 30 (-136804.3059, 0.0357)
```

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## Iteration: 40 (-136803.1946, 0.0347)
## Iteration: 50 (-136802.1452, 0.0338)
## Group probs = (0.8165, 0.1368, 0.0467)
##
## Outer iteration: 9
## Iteration: 1 (-136597.4814, 0.1398)
## Iteration: 10 (-136596.4460, 0.0336)
## Iteration: 20 (-136595.4096, 0.0328)
## Iteration: 30 (-136594.4367, 0.0320)
## Iteration: 40 (-136593.5178, 0.0312)
## Iteration: 50 (-136592.6471, 0.0304)
## Group probs = (0.8162, 0.1366, 0.0471)
##
## Outer iteration: 10
## Iteration: 1 (-136506.1282, 0.0464)
## Iteration: 10 (-136505.3645, 0.0299)
## Iteration: 20 (-136504.5615, 0.0292)
## Iteration: 30 (-136503.7968, 0.0285)
## Iteration: 40 (-136503.0675, 0.0279)
## Iteration: 50 (-136502.3709, 0.0273)
## Group probs = (0.8171, 0.1357, 0.0472)
##
## Outer iteration: 11
## Iteration: 1 (-136667.1115, 0.0475)
## Iteration: 10 (-136666.4742, 0.0266)
## Iteration: 20 (-136665.8153, 0.0262)
## Iteration: 30 (-136665.1888, 0.0257)
## Iteration: 40 (-136664.5902, 0.0252)
## Iteration: 50 (-136664.0170, 0.0247)
## Group probs = (0.8187, 0.1344, 0.0469)
##
## Outer iteration: 12
## Iteration: 1 (-137104.6127, 0.0302)
## Iteration: 10 (-137104.0608, 0.0242)
## Iteration: 20 (-137103.5183, 0.0238)
## Iteration: 30 (-137103.0014, 0.0234)
## Iteration: 40 (-137102.5059, 0.0229)
## Iteration: 50 (-137102.0297, 0.0225)
## Group probs = (0.8183, 0.1354, 0.0464)
##
## Outer iteration: 13
## Iteration: 1 (-137037.1318, 0.0784)
## Iteration: 10 (-137036.6606, 0.0222)
## Iteration: 20 (-137036.1800, 0.0219)
## Iteration: 30 (-137035.7221, 0.0216)
## Iteration: 40 (-137035.2833, 0.0213)
## Iteration: 50 (-137034.8613, 0.0209)
## Group probs = (0.8182, 0.1357, 0.0461)
##
## Outer iteration: 14
## Iteration: 1 (-137036.1649, 0.0223)
## Iteration: 10 (-137035.7773, 0.0205)
## Iteration: 20 (-137035.3695, 0.0203)
## Iteration: 30 (-137034.9777, 0.0200)
```

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## Iteration: 40 (-137034.5999, 0.0197)
## Iteration: 50 (-137034.2351, 0.0195)
## Group probs = (0.8175, 0.1361, 0.0464)
##
## Outer iteration: 15
## Iteration: 1 (-136829.4283, 0.0195)
## Iteration: 10 (-136829.0981, 0.0194)
## Iteration: 20 (-136828.7530, 0.0190)
## Iteration: 30 (-136828.4197, 0.0187)
## Iteration: 40 (-136828.0970, 0.0184)
## Iteration: 50 (-136827.7842, 0.0181)
## Group probs = (0.8180, 0.1355, 0.0465)
##
## Outer iteration: 16
## Iteration: 1 (-136905.8863, 0.0745)
## Iteration: 10 (-136905.5862, 0.0178)
## Iteration: 20 (-136905.2793, 0.0176)
## Iteration: 30 (-136904.9850, 0.0174)
## Iteration: 40 (-136904.7006, 0.0172)
## Iteration: 50 (-136904.4250, 0.0169)
## Group probs = (0.8173, 0.1362, 0.0466)
##
## Outer iteration: 17
## Iteration: 1 (-136728.7387, 0.0244)
## Iteration: 10 (-136728.4876, 0.0169)
## Iteration: 20 (-136728.2235, 0.0166)
## Iteration: 30 (-136727.9672, 0.0164)
## Iteration: 40 (-136727.7180, 0.0161)
## Iteration: 50 (-136727.4755, 0.0159)
## Group probs = (0.8167, 0.1366, 0.0467)
##
## Outer iteration: 18
## Iteration: 1 (-136573.9874, 0.0266)
## Iteration: 10 (-136573.7624, 0.0159)
## Iteration: 20 (-136573.5258, 0.0156)
## Iteration: 30 (-136573.2961, 0.0154)
## Iteration: 40 (-136573.0724, 0.0152)
## Iteration: 50 (-136572.8544, 0.0150)
## Group probs = (0.8159, 0.1374, 0.0467)
##
## Outer iteration: 19
## Iteration: 1 (-136371.0385, 0.0264)
## Iteration: 10 (-136370.8284, 0.0149)
## Iteration: 20 (-136370.6145, 0.0147)
## Iteration: 30 (-136370.4070, 0.0146)
## Iteration: 40 (-136370.2051, 0.0144)
## Iteration: 50 (-136370.0082, 0.0142)
## Group probs = (0.8150, 0.1379, 0.0470)
##
## Outer iteration: 20
## Iteration: 1 (-136126.7845, 0.0206)
## Iteration: 10 (-136126.5918, 0.0143)
## Iteration: 20 (-136126.3977, 0.0141)
## Iteration: 30 (-136126.2098, 0.0139)
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## Iteration: 40 (-136126.0269, 0.0137)
## Iteration: 50 (-136125.8485, 0.0136)
## Group probs = (0.8152, 0.1386, 0.0462)
##
## Outer iteration: 21
## Iteration: 1 (-136291.0658, 0.1001)
## Iteration: 10 (-136290.8704, 0.0136)
## Iteration: 20 (-136290.6808, 0.0134)
## Iteration: 30 (-136290.4998, 0.0133)
## Iteration: 40 (-136290.3250, 0.0131)
## Iteration: 50 (-136290.1553, 0.0130)
## Group probs = (0.8163, 0.1375, 0.0462)
##
## Outer iteration: 22
## Iteration: 1 (-136538.4462, 0.0439)
## Iteration: 10 (-136538.2755, 0.0127)
## Iteration: 20 (-136538.1110, 0.0127)
## Iteration: 30 (-136537.9527, 0.0126)
## Iteration: 40 (-136537.7985, 0.0125)
## Iteration: 50 (-136537.6480, 0.0123)
## Group probs = (0.8155, 0.1377, 0.0468)
##
## Outer iteration: 23
## Iteration: 1 (-136276.0891, 0.0516)
## Iteration: 10 (-136275.9401, 0.0124)
## Iteration: 20 (-136275.7923, 0.0122)
## Iteration: 30 (-136275.6489, 0.0120)
## Iteration: 40 (-136275.5090, 0.0119)
## Iteration: 50 (-136275.3722, 0.0118)
## Group probs = (0.8166, 0.1374, 0.0460)
##
## Outer iteration: 24
## Iteration: 1 (-136627.9649, 0.0613)
## Iteration: 10 (-136627.8143, 0.0116)
## Iteration: 20 (-136627.6753, 0.0116)
## Iteration: 30 (-136627.5412, 0.0115)
## Iteration: 40 (-136627.4105, 0.0114)
## Iteration: 50 (-136627.2829, 0.0113)
## Group probs = (0.8144, 0.1395, 0.0460)
##
## Outer iteration: 25
## Iteration: 1 (-136100.4066, 0.0673)
## Iteration: 10 (-136100.1999, 0.0117)
## Iteration: 20 (-136100.0499, 0.0114)
## Iteration: 30 (-136099.9126, 0.0112)
## Iteration: 40 (-136099.7822, 0.0111)
## Iteration: 50 (-136099.6567, 0.0110)
## Group probs = (0.8147, 0.1389, 0.0464)
##
## Outer iteration: 26
## Iteration: 1 (-136143.4419, 0.0501)
## Iteration: 10 (-136143.3257, 0.0110)
## Iteration: 20 (-136143.2078, 0.0108)
## Iteration: 30 (-136143.0932, 0.0107)
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## Iteration: 40 (-136142.9810, 0.0106)
## Iteration: 50 (-136142.8711, 0.0105)
## Group probs = (0.8152, 0.1386, 0.0462)
##
## Outer iteration: 27
## Iteration: 1 (-136281.9408, 0.0145)
## Iteration: 10 (-136281.8343, 0.0104)
## Iteration: 20 (-136281.7243, 0.0103)
## Iteration: 30 (-136281.6170, 0.0102)
## Iteration: 40 (-136281.5118, 0.0102)
## Iteration: 50 (-136281.4086, 0.0101)
## Group probs = (0.8151, 0.1385, 0.0464)
##
## Outer iteration: 28
## Iteration: 1 (-136240.6526, 0.0141)
## Iteration: 10 (-136240.5542, 0.0101)
## Iteration: 20 (-136240.4538, 0.0100)
## Iteration: 30 (-136240.3562, 0.0099)
## Iteration: 40 (-136240.2605, 0.0098)
## Iteration: 50 (-136240.1665, 0.0097)
## Group probs = (0.8168, 0.1371, 0.0461)
##
## Outer iteration: 29
## Iteration: 1 (-136669.4293, 0.0304)
## Iteration: 10 (-136669.2981, 0.0096)
## Iteration: 20 (-136669.1990, 0.0095)
## Iteration: 30 (-136669.1061, 0.0095)
## Iteration: 40 (-136669.0162, 0.0094)
## Iteration: 50 (-136668.9286, 0.0094)
## Group probs = (0.8165, 0.1377, 0.0458)
##
## Outer iteration: 30
## Iteration: 1 (-136636.3855, 0.0316)
## Iteration: 10 (-136636.2997, 0.0093)
## Iteration: 20 (-136636.2099, 0.0093)
## Iteration: 30 (-136636.1225, 0.0092)
## Iteration: 40 (-136636.0369, 0.0091)
## Iteration: 50 (-136635.9530, 0.0091)
## Group probs = (0.8165, 0.1377, 0.0459)
##
## Outer iteration: 31
## Iteration: 1 (-136621.3323, 0.0282)
## Iteration: 10 (-136621.2475, 0.0092)
## Iteration: 20 (-136621.1633, 0.0091)
## Iteration: 30 (-136621.0817, 0.0090)
## Iteration: 40 (-136621.0018, 0.0089)
## Iteration: 50 (-136620.9234, 0.0088)
## Group probs = (0.8168, 0.1368, 0.0464)
##
## Outer iteration: 32
## Iteration: 1 (-136627.7980, 0.0930)
## Iteration: 10 (-136627.7052, 0.0089)
## Iteration: 20 (-136627.6234, 0.0087)
## Iteration: 30 (-136627.5463, 0.0086)

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## Iteration: 40 (-136627.4719, 0.0086)
## Iteration: 50 (-136627.3994, 0.0085)
## Group probs = (0.8146, 0.1389, 0.0464)
##
## Outer iteration: 33
## Iteration: 1 (-136131.4643, 0.0756)
## Iteration: 10 (-136131.3156, 0.0089)
## Iteration: 20 (-136131.2263, 0.0086)
## Iteration: 30 (-136131.1472, 0.0085)
## Iteration: 40 (-136131.0726, 0.0084)
## Iteration: 50 (-136131.0006, 0.0083)
## Group probs = (0.8148, 0.1389, 0.0463)
##
## Outer iteration: 34
## Iteration: 1 (-136200.4227, 0.0116)
## Iteration: 10 (-136200.3563, 0.0082)
## Iteration: 20 (-136200.2863, 0.0082)
## Iteration: 30 (-136200.2179, 0.0081)
## Iteration: 40 (-136200.1505, 0.0081)
## Iteration: 50 (-136200.0843, 0.0080)
## Group probs = (0.8140, 0.1400, 0.0461)
##
## Outer iteration: 35
## Iteration: 1 (-136032.7627, 0.0559)
## Iteration: 10 (-136032.6763, 0.0082)
## Iteration: 20 (-136032.5999, 0.0081)
## Iteration: 30 (-136032.5281, 0.0080)
## Iteration: 40 (-136032.4591, 0.0079)
## Iteration: 50 (-136032.3922, 0.0079)
## Group probs = (0.8137, 0.1399, 0.0464)
##
## Outer iteration: 36
## Iteration: 1 (-135965.1168, 0.0079)
## Iteration: 10 (-135965.0554, 0.0079)
## Iteration: 20 (-135964.9910, 0.0078)
## Iteration: 30 (-135964.9281, 0.0077)
## Iteration: 40 (-135964.8664, 0.0077)
## Iteration: 50 (-135964.8057, 0.0076)
## Group probs = (0.8158, 0.1378, 0.0463)
##
## Outer iteration: 37
## Iteration: 1 (-136441.0252, 0.0824)
## Iteration: 10 (-136440.8835, 0.0078)
## Iteration: 20 (-136440.8039, 0.0076)
## Iteration: 30 (-136440.7364, 0.0075)
## Iteration: 40 (-136440.6743, 0.0075)
## Iteration: 50 (-136440.6153, 0.0074)
## Group probs = (0.8157, 0.1382, 0.0462)
##
## Outer iteration: 38
## Iteration: 1 (-136434.5757, 0.0475)
## Iteration: 10 (-136434.5205, 0.0074)
## Iteration: 20 (-136434.4650, 0.0073)
## Iteration: 30 (-136434.4109, 0.0073)

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## Iteration: 40 (-136434.3576, 0.0072)
## Iteration: 50 (-136434.3050, 0.0072)
## Group probs = (0.8155, 0.1384, 0.0461)
##
## Outer iteration: 39
## Iteration: 1 (-136403.3279, 0.0089)
## Iteration: 10 (-136403.2747, 0.0071)
## Iteration: 20 (-136403.2210, 0.0071)
## Iteration: 30 (-136403.1686, 0.0070)
## Iteration: 40 (-136403.1172, 0.0070)
## Iteration: 50 (-136403.0666, 0.0070)
## Group probs = (0.8140, 0.1402, 0.0457)
##
## Outer iteration: 40
## Iteration: 1 (-136063.9965, 0.0672)
## Iteration: 10 (-136063.8934, 0.0073)
## Iteration: 20 (-136063.8260, 0.0072)
## Iteration: 30 (-136063.7657, 0.0071)
## Iteration: 40 (-136063.7090, 0.0070)
## Iteration: 50 (-136063.6546, 0.0070)
## Group probs = (0.8139, 0.1398, 0.0463)
##
## Outer iteration: 1
## Iteration: 1 (-152987.6752,   Inf)
## Iteration: 10 (-138226.1670, 2.6341)
## Iteration: 20 (-137037.6138, 1.1415)
## Iteration: 30 (-136645.8691, 0.6984)
## Iteration: 40 (-136459.7748, 0.4900)
## Iteration: 50 (-136354.2015, 0.3712)
## Group probs = (0.8166, 0.1365, 0.0469)
##
## Outer iteration: 2
## Iteration: 1 (-136963.9051, 0.4167)
## Iteration: 10 (-136911.6771, 0.2847)
## Iteration: 20 (-136871.4519, 0.2340)
## Iteration: 30 (-136842.2728, 0.1982)
## Iteration: 40 (-136820.0806, 0.1717)
## Iteration: 50 (-136802.5822, 0.1513)
## Group probs = (0.8181, 0.1350, 0.0469)
##
## Outer iteration: 3
## Iteration: 1 (-137094.9551, 0.1890)
## Iteration: 10 (-137081.9965, 0.1359)
## Iteration: 20 (-137070.0715, 0.1228)
## Iteration: 30 (-137060.0690, 0.1119)
## Iteration: 40 (-137051.5459, 0.1028)
## Iteration: 50 (-137044.1917, 0.0951)
## Group probs = (0.8178, 0.1342, 0.0479)
##
## Outer iteration: 4
## Iteration: 1 (-136861.3605, 0.1536)
## Iteration: 10 (-136855.3935, 0.0893)
## Iteration: 20 (-136849.5875, 0.0833)
## Iteration: 30 (-136844.4654, 0.0781)
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## Iteration: 40 (-136839.9109, 0.0736)
## Iteration: 50 (-136835.8342, 0.0695)
## Group probs = (0.8168, 0.1350, 0.0482)
##
## Outer iteration: 5
## Iteration: 1 (-136546.4036, 0.0692)
## Iteration: 10 (-136542.9132, 0.0665)
## Iteration: 20 (-136539.4238, 0.0633)
## Iteration: 30 (-136536.2616, 0.0604)
## Iteration: 40 (-136533.3820, 0.0577)
## Iteration: 50 (-136530.7489, 0.0552)
## Group probs = (0.8172, 0.1350, 0.0477)
##
## Outer iteration: 6
## Iteration: 1 (-136643.8763, 0.0636)
## Iteration: 10 (-136641.5684, 0.0528)
## Iteration: 20 (-136639.2271, 0.0510)
## Iteration: 30 (-136637.0737, 0.0492)
## Iteration: 40 (-136635.0839, 0.0474)
## Iteration: 50 (-136633.2391, 0.0457)
## Group probs = (0.8170, 0.1361, 0.0470)
##
## Outer iteration: 7
## Iteration: 1 (-136661.8263, 0.1167)
## Iteration: 10 (-136660.1428, 0.0448)
## Iteration: 20 (-136658.4199, 0.0434)
## Iteration: 30 (-136656.8187, 0.0421)
## Iteration: 40 (-136655.3246, 0.0407)
## Iteration: 50 (-136653.9265, 0.0395)
## Group probs = (0.8180, 0.1357, 0.0464)
##
## Outer iteration: 8
## Iteration: 1 (-136962.3068, 0.0526)
## Iteration: 10 (-136961.0277, 0.0384)
## Iteration: 20 (-136959.7181, 0.0375)
## Iteration: 30 (-136958.4927, 0.0365)
## Iteration: 40 (-136957.3411, 0.0355)
## Iteration: 50 (-136956.2559, 0.0346)
## Group probs = (0.8186, 0.1356, 0.0458)
##
## Outer iteration: 9
## Iteration: 1 (-137178.3924, 0.0720)
## Iteration: 10 (-137177.3902, 0.0339)
## Iteration: 20 (-137176.3558, 0.0331)
## Iteration: 30 (-137175.3819, 0.0324)
## Iteration: 40 (-137174.4613, 0.0316)
## Iteration: 50 (-137173.5890, 0.0308)
## Group probs = (0.8161, 0.1371, 0.0468)
##
## Outer iteration: 10
## Iteration: 1 (-136422.1666, 0.0663)
## Iteration: 10 (-136421.3023, 0.0304)
## Iteration: 20 (-136420.4927, 0.0295)
## Iteration: 30 (-136419.7277, 0.0288)

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## Iteration: 40 (-136419.0002, 0.0282)
## Iteration: 50 (-136418.3067, 0.0275)
## Group probs = (0.8163, 0.1368, 0.0469)
##
## Outer iteration: 11
## Iteration: 1 (-136467.7948, 0.0450)
## Iteration: 10 (-136467.1720, 0.0271)
## Iteration: 20 (-136466.5191, 0.0266)
## Iteration: 30 (-136465.8967, 0.0260)
## Iteration: 40 (-136465.3019, 0.0255)
## Iteration: 50 (-136464.7323, 0.0250)
## Group probs = (0.8170, 0.1364, 0.0465)
##
## Outer iteration: 12
## Iteration: 1 (-136649.4821, 0.0299)
## Iteration: 10 (-136648.9657, 0.0242)
## Iteration: 20 (-136648.4276, 0.0239)
## Iteration: 30 (-136647.9127, 0.0235)
## Iteration: 40 (-136647.4182, 0.0231)
## Iteration: 50 (-136646.9426, 0.0227)
## Group probs = (0.8171, 0.1364, 0.0466)
##
## Outer iteration: 13
## Iteration: 1 (-136648.2278, 0.0368)
## Iteration: 10 (-136647.8021, 0.0223)
## Iteration: 20 (-136647.3498, 0.0219)
## Iteration: 30 (-136646.9149, 0.0216)
## Iteration: 40 (-136646.4958, 0.0212)
## Iteration: 50 (-136646.0913, 0.0209)
## Group probs = (0.8162, 0.1370, 0.0467)
##
## Outer iteration: 14
## Iteration: 1 (-136409.4725, 0.0212)
## Iteration: 10 (-136409.1019, 0.0207)
## Iteration: 20 (-136408.7162, 0.0203)
## Iteration: 30 (-136408.3444, 0.0200)
## Iteration: 40 (-136407.9851, 0.0197)
## Iteration: 50 (-136407.6375, 0.0194)
## Group probs = (0.8166, 0.1371, 0.0462)
##
## Outer iteration: 15
## Iteration: 1 (-136535.3859, 0.0214)
## Iteration: 10 (-136535.0666, 0.0190)
## Iteration: 20 (-136534.7297, 0.0188)
## Iteration: 30 (-136534.4042, 0.0186)
## Iteration: 40 (-136534.0891, 0.0183)
## Iteration: 50 (-136533.7837, 0.0181)
## Group probs = (0.8146, 0.1392, 0.0462)
##
## Outer iteration: 16
## Iteration: 1 (-136047.6542, 0.0701)
## Iteration: 10 (-136047.2995, 0.0183)
## Iteration: 20 (-136046.9840, 0.0179)
## Iteration: 30 (-136046.6855, 0.0176)
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## Iteration: 40 (-136046.3986, 0.0173)
## Iteration: 50 (-136046.1214, 0.0170)
## Group probs = (0.8164, 0.1380, 0.0456)
##
## Outer iteration: 17
## Iteration: 1 (-136609.6204, 0.0662)
## Iteration: 10 (-136609.3031, 0.0170)
## Iteration: 20 (-136609.0235, 0.0167)
## Iteration: 30 (-136608.7561, 0.0165)
## Iteration: 40 (-136608.4982, 0.0163)
## Iteration: 50 (-136608.2485, 0.0161)
## Group probs = (0.8156, 0.1381, 0.0463)
##
## Outer iteration: 18
## Iteration: 1 (-136356.9361, 0.0378)
## Iteration: 10 (-136356.7044, 0.0160)
## Iteration: 20 (-136356.4651, 0.0157)
## Iteration: 30 (-136356.2330, 0.0155)
## Iteration: 40 (-136356.0072, 0.0153)
## Iteration: 50 (-136355.7874, 0.0151)
## Group probs = (0.8156, 0.1375, 0.0468)
##
## Outer iteration: 19
## Iteration: 1 (-136315.6958, 0.0482)
## Iteration: 10 (-136315.4974, 0.0149)
## Iteration: 20 (-136315.2882, 0.0147)
## Iteration: 30 (-136315.0854, 0.0146)
## Iteration: 40 (-136314.8882, 0.0144)
## Iteration: 50 (-136314.6961, 0.0142)
## Group probs = (0.8159, 0.1385, 0.0457)
##
## Outer iteration: 20
## Iteration: 1 (-136510.9233, 0.1455)
## Iteration: 10 (-136510.6794, 0.0143)
## Iteration: 20 (-136510.4609, 0.0141)
## Iteration: 30 (-136510.2566, 0.0140)
## Iteration: 40 (-136510.0618, 0.0138)
## Iteration: 50 (-136509.8745, 0.0137)
## Group probs = (0.8153, 0.1387, 0.0460)
##
## Outer iteration: 21
## Iteration: 1 (-136353.1591, 0.0166)
## Iteration: 10 (-136352.9902, 0.0136)
## Iteration: 20 (-136352.8122, 0.0134)
## Iteration: 30 (-136352.6394, 0.0133)
## Iteration: 40 (-136352.4711, 0.0131)
## Iteration: 50 (-136352.3069, 0.0130)
## Group probs = (0.8156, 0.1377, 0.0467)
##
## Outer iteration: 22
## Iteration: 1 (-136334.2601, 0.0826)
## Iteration: 10 (-136334.0934, 0.0129)
## Iteration: 20 (-136333.9302, 0.0127)
## Iteration: 30 (-136333.7742, 0.0126)

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## Iteration: 40 (-136333.6232, 0.0125)
## Iteration: 50 (-136333.4764, 0.0123)
## Group probs = (0.8165, 0.1370, 0.0465)
##
## Outer iteration: 23
## Iteration: 1 (-136564.0637, 0.0283)
## Iteration: 10 (-136563.9146, 0.0122)
## Iteration: 20 (-136563.7686, 0.0121)
## Iteration: 30 (-136563.6282, 0.0120)
## Iteration: 40 (-136563.4918, 0.0118)
## Iteration: 50 (-136563.3587, 0.0117)
## Group probs = (0.8156, 0.1383, 0.0461)
##
## Outer iteration: 24
## Iteration: 1 (-136396.0740, 0.0852)
## Iteration: 10 (-136395.9215, 0.0118)
## Iteration: 20 (-136395.7787, 0.0117)
## Iteration: 30 (-136395.6424, 0.0115)
## Iteration: 40 (-136395.5106, 0.0114)
## Iteration: 50 (-136395.3822, 0.0113)
## Group probs = (0.8169, 0.1375, 0.0456)
##
## Outer iteration: 25
## Iteration: 1 (-136756.8800, 0.0157)
## Iteration: 10 (-136756.7368, 0.0112)
## Iteration: 20 (-136756.6095, 0.0111)
## Iteration: 30 (-136756.4873, 0.0110)
## Iteration: 40 (-136756.3685, 0.0109)
## Iteration: 50 (-136756.2525, 0.0109)
## Group probs = (0.8157, 0.1387, 0.0456)
##
## Outer iteration: 26
## Iteration: 1 (-136455.2680, 0.0118)
## Iteration: 10 (-136455.1350, 0.0108)
## Iteration: 20 (-136455.0150, 0.0107)
## Iteration: 30 (-136454.8994, 0.0106)
## Iteration: 40 (-136454.7870, 0.0105)
## Iteration: 50 (-136454.6773, 0.0104)
## Group probs = (0.8149, 0.1389, 0.0462)
##
## Outer iteration: 27
## Iteration: 1 (-136199.0435, 0.0585)
## Iteration: 10 (-136198.9259, 0.0106)
## Iteration: 20 (-136198.8178, 0.0104)
## Iteration: 30 (-136198.7136, 0.0102)
## Iteration: 40 (-136198.6120, 0.0101)
## Iteration: 50 (-136198.5126, 0.0100)
## Group probs = (0.8145, 0.1387, 0.0468)
##
## Outer iteration: 28
## Iteration: 1 (-136019.9690, 0.0735)
## Iteration: 10 (-136019.8534, 0.0102)
## Iteration: 20 (-136019.7474, 0.0100)
## Iteration: 30 (-136019.6475, 0.0099)
```

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## Iteration: 40 (-136019.5516, 0.0098)
## Iteration: 50 (-136019.4588, 0.0097)
## Group probs = (0.8150, 0.1390, 0.0460)
##
## Outer iteration: 29
## Iteration: 1 (-136228.4072, 0.0858)
## Iteration: 10 (-136228.3026, 0.0095)
## Iteration: 20 (-136228.2090, 0.0095)
## Iteration: 30 (-136228.1193, 0.0094)
## Iteration: 40 (-136228.0320, 0.0093)
## Iteration: 50 (-136227.9465, 0.0093)
## Group probs = (0.8139, 0.1390, 0.0471)
##
## Outer iteration: 30
## Iteration: 1 (-135872.4844, 0.0630)
## Iteration: 10 (-135872.3528, 0.0097)
## Iteration: 20 (-135872.2565, 0.0093)
## Iteration: 30 (-135872.1687, 0.0092)
## Iteration: 40 (-135872.0852, 0.0091)
## Iteration: 50 (-135872.0047, 0.0090)
## Group probs = (0.8143, 0.1386, 0.0471)
##
## Outer iteration: 31
## Iteration: 1 (-135953.5448, 0.0114)
## Iteration: 10 (-135953.4685, 0.0089)
## Iteration: 20 (-135953.3901, 0.0088)
## Iteration: 30 (-135953.3141, 0.0088)
## Iteration: 40 (-135953.2398, 0.0087)
## Iteration: 50 (-135953.1670, 0.0086)
## Group probs = (0.8144, 0.1387, 0.0469)
##
## Outer iteration: 32
## Iteration: 1 (-135941.9013, 0.0468)
## Iteration: 10 (-135941.8182, 0.0086)
## Iteration: 20 (-135941.7427, 0.0085)
## Iteration: 30 (-135941.6710, 0.0085)
## Iteration: 40 (-135941.6013, 0.0084)
## Iteration: 50 (-135941.5331, 0.0083)
## Group probs = (0.8143, 0.1393, 0.0464)
##
## Outer iteration: 33
## Iteration: 1 (-135981.5047, 0.0606)
## Iteration: 10 (-135981.4348, 0.0084)
## Iteration: 20 (-135981.3654, 0.0083)
## Iteration: 30 (-135981.2979, 0.0082)
## Iteration: 40 (-135981.2318, 0.0082)
## Iteration: 50 (-135981.1667, 0.0081)
## Group probs = (0.8150, 0.1388, 0.0462)
##
## Outer iteration: 34
## Iteration: 1 (-136181.6285, 0.0116)
## Iteration: 10 (-136181.5599, 0.0081)
## Iteration: 20 (-136181.4937, 0.0080)
## Iteration: 30 (-136181.4294, 0.0080)

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## Iteration: 40 (-136181.3665, 0.0079)
## Iteration: 50 (-136181.3047, 0.0079)
## Group probs = (0.8149, 0.1391, 0.0460)
##
## Outer iteration: 35
## Iteration: 1 (-136206.9801, 0.0575)
## Iteration: 10 (-136206.9097, 0.0079)
## Iteration: 20 (-136206.8412, 0.0078)
## Iteration: 30 (-136206.7763, 0.0077)
## Iteration: 40 (-136206.7138, 0.0077)
## Iteration: 50 (-136206.6530, 0.0076)
## Group probs = (0.8142, 0.1397, 0.0460)
##
## Outer iteration: 36
## Iteration: 1 (-136070.5135, 0.0432)
## Iteration: 10 (-136070.4409, 0.0078)
## Iteration: 20 (-136070.3731, 0.0077)
## Iteration: 30 (-136070.3091, 0.0076)
## Iteration: 40 (-136070.2475, 0.0076)
## Iteration: 50 (-136070.1876, 0.0075)
## Group probs = (0.8150, 0.1390, 0.0460)
##
## Outer iteration: 37
## Iteration: 1 (-136271.1361, 0.0125)
## Iteration: 10 (-136271.0750, 0.0075)
## Iteration: 20 (-136271.0180, 0.0074)
## Iteration: 30 (-136270.9624, 0.0074)
## Iteration: 40 (-136270.9078, 0.0073)
## Iteration: 50 (-136270.8540, 0.0073)
## Group probs = (0.8145, 0.1390, 0.0465)
##
## Outer iteration: 38
## Iteration: 1 (-136068.1186, 0.0566)
## Iteration: 10 (-136068.0590, 0.0073)
## Iteration: 20 (-136068.0051, 0.0072)
## Iteration: 30 (-136067.9531, 0.0071)
## Iteration: 40 (-136067.9021, 0.0071)
## Iteration: 50 (-136067.8521, 0.0071)
## Group probs = (0.8128, 0.1409, 0.0462)
##
## Outer iteration: 39
## Iteration: 1 (-135715.2491, 0.0892)
## Iteration: 10 (-135715.1364, 0.0075)
## Iteration: 20 (-135715.0688, 0.0072)
## Iteration: 30 (-135715.0099, 0.0071)
## Iteration: 40 (-135714.9549, 0.0070)
## Iteration: 50 (-135714.9024, 0.0070)
## Group probs = (0.8106, 0.1435, 0.0459)
##
## Outer iteration: 40
## Iteration: 1 (-135260.9943, 0.1338)
## Iteration: 10 (-135260.7888, 0.0081)
## Iteration: 20 (-135260.6787, 0.0076)
## Iteration: 30 (-135260.5934, 0.0073)

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## Iteration: 40 (-135260.5206, 0.0072)
## Iteration: 50 (-135260.4555, 0.0070)
## Group probs = (0.8120, 0.1416, 0.0464)
##
## Outer iteration: 1
## Iteration: 1 (-153690.1273,    Inf)
## Iteration: 10 (-138960.3454, 2.6239)
## Iteration: 20 (-137775.1428, 1.1332)
## Iteration: 30 (-137387.3015, 0.6905)
## Iteration: 40 (-137204.8821, 0.4826)
## Iteration: 50 (-137102.6120, 0.3641)
## Group probs = (0.8170, 0.1360, 0.0470)
##
## Outer iteration: 2
## Iteration: 1 (-137275.3702, 0.3902)
## Iteration: 10 (-137224.7240, 0.2789)
## Iteration: 20 (-137186.3603, 0.2280)
## Iteration: 30 (-137159.0179, 0.1922)
## Iteration: 40 (-137138.5427, 0.1657)
## Iteration: 50 (-137122.6059, 0.1456)
## Group probs = (0.8178, 0.1347, 0.0475)
##
## Outer iteration: 3
## Iteration: 1 (-137234.7892, 0.1599)
## Iteration: 10 (-137222.8278, 0.1317)
## Iteration: 20 (-137211.9963, 0.1182)
## Iteration: 30 (-137203.0322, 0.1073)
## Iteration: 40 (-137195.4684, 0.0982)
## Iteration: 50 (-137188.9871, 0.0906)
## Group probs = (0.8159, 0.1358, 0.0483)
##
## Outer iteration: 4
## Iteration: 1 (-136701.9869, 0.0954)
## Iteration: 10 (-136696.6025, 0.0862)
## Iteration: 20 (-136691.4348, 0.0800)
## Iteration: 30 (-136686.9051, 0.0748)
## Iteration: 40 (-136682.8932, 0.0702)
## Iteration: 50 (-136679.3109, 0.0663)
## Group probs = (0.8149, 0.1364, 0.0487)
##
## Outer iteration: 5
## Iteration: 1 (-136410.6548, 0.0676)
## Iteration: 10 (-136407.5995, 0.0636)
## Iteration: 20 (-136404.5503, 0.0604)
## Iteration: 30 (-136401.7900, 0.0575)
## Iteration: 40 (-136399.2774, 0.0549)
## Iteration: 50 (-136396.9797, 0.0525)
## Group probs = (0.8142, 0.1367, 0.0491)
##
## Outer iteration: 6
## Iteration: 1 (-136221.9684, 0.0568)
## Iteration: 10 (-136219.9838, 0.0508)
## Iteration: 20 (-136217.9635, 0.0487)
## Iteration: 30 (-136216.1008, 0.0468)

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## Iteration: 40 (-136214.3771, 0.0451)
## Iteration: 50 (-136212.7771, 0.0435)
## Group probs = (0.8138, 0.1372, 0.0490)
##
## Outer iteration: 7
## Iteration: 1 (-136163.7798, 0.1135)
## Iteration: 10 (-136162.3348, 0.0428)
## Iteration: 20 (-136160.8548, 0.0413)
## Iteration: 30 (-136159.4772, 0.0400)
## Iteration: 40 (-136158.1900, 0.0387)
## Iteration: 50 (-136156.9841, 0.0375)
## Group probs = (0.8130, 0.1382, 0.0488)
##
## Outer iteration: 8
## Iteration: 1 (-136037.2351, 0.1091)
## Iteration: 10 (-136036.1074, 0.0369)
## Iteration: 20 (-136034.9567, 0.0359)
## Iteration: 30 (-136033.8819, 0.0349)
## Iteration: 40 (-136032.8731, 0.0339)
## Iteration: 50 (-136031.9231, 0.0330)
## Group probs = (0.8114, 0.1391, 0.0495)
##
## Outer iteration: 9
## Iteration: 1 (-135544.2601, 0.0535)
## Iteration: 10 (-135543.3749, 0.0326)
## Iteration: 20 (-135542.4932, 0.0317)
## Iteration: 30 (-135541.6619, 0.0309)
## Iteration: 40 (-135540.8750, 0.0301)
## Iteration: 50 (-135540.1281, 0.0294)
## Group probs = (0.8126, 0.1376, 0.0498)
##
## Outer iteration: 10
## Iteration: 1 (-135812.9345, 0.0896)
## Iteration: 10 (-135812.2403, 0.0287)
## Iteration: 20 (-135811.5442, 0.0280)
## Iteration: 30 (-135810.8872, 0.0274)
## Iteration: 40 (-135810.2632, 0.0268)
## Iteration: 50 (-135809.6684, 0.0262)
## Group probs = (0.8117, 0.1392, 0.0491)
##
## Outer iteration: 11
## Iteration: 1 (-135681.5811, 0.1459)
## Iteration: 10 (-135680.9803, 0.0262)
## Iteration: 20 (-135680.3842, 0.0256)
## Iteration: 30 (-135679.8215, 0.0251)
## Iteration: 40 (-135679.2860, 0.0245)
## Iteration: 50 (-135678.7746, 0.0241)
## Group probs = (0.8111, 0.1398, 0.0491)
##
## Outer iteration: 12
## Iteration: 1 (-135542.5228, 0.0243)
## Iteration: 10 (-135542.0605, 0.0238)
## Iteration: 20 (-135541.5748, 0.0233)
## Iteration: 30 (-135541.1098, 0.0229)

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## Iteration: 40 (-135540.6635, 0.0225)
## Iteration: 50 (-135540.2345, 0.0221)
## Group probs = (0.8074, 0.1425, 0.0501)
##
## Outer iteration: 13
## Iteration: 1 (-134530.2417, 0.0246)
## Iteration: 10 (-134529.6303, 0.0226)
## Iteration: 20 (-134529.1886, 0.0218)
## Iteration: 30 (-134528.7806, 0.0213)
## Iteration: 40 (-134528.3939, 0.0208)
## Iteration: 50 (-134528.0242, 0.0204)
## Group probs = (0.8074, 0.1438, 0.0488)
##
## Outer iteration: 14
## Iteration: 1 (-134717.7664, 0.1794)
## Iteration: 10 (-134717.3332, 0.0207)
## Iteration: 20 (-134716.9317, 0.0203)
## Iteration: 30 (-134716.5569, 0.0199)
## Iteration: 40 (-134716.2016, 0.0196)
## Iteration: 50 (-134715.8622, 0.0192)
## Group probs = (0.8084, 0.1424, 0.0493)
##
## Outer iteration: 15
## Iteration: 1 (-134920.5799, 0.0602)
## Iteration: 10 (-134920.2663, 0.0189)
## Iteration: 20 (-134919.9553, 0.0186)
## Iteration: 30 (-134919.6563, 0.0183)
## Iteration: 40 (-134919.3672, 0.0180)
## Iteration: 50 (-134919.0873, 0.0178)
## Group probs = (0.8079, 0.1420, 0.0501)
##
## Outer iteration: 16
## Iteration: 1 (-134735.5365, 0.0697)
## Iteration: 10 (-134735.2740, 0.0177)
## Iteration: 20 (-134735.0065, 0.0173)
## Iteration: 30 (-134734.7489, 0.0170)
## Iteration: 40 (-134734.4994, 0.0168)
## Iteration: 50 (-134734.2574, 0.0165)
## Group probs = (0.8100, 0.1407, 0.0493)
##
## Outer iteration: 17
## Iteration: 1 (-135385.6554, 0.0585)
## Iteration: 10 (-135385.3506, 0.0163)
## Iteration: 20 (-135385.1037, 0.0161)
## Iteration: 30 (-135384.8696, 0.0159)
## Iteration: 40 (-135384.6442, 0.0157)
## Iteration: 50 (-135384.4260, 0.0155)
## Group probs = (0.8098, 0.1398, 0.0503)
##
## Outer iteration: 18
## Iteration: 1 (-135164.3394, 0.1352)
## Iteration: 10 (-135164.0995, 0.0154)
## Iteration: 20 (-135163.8799, 0.0151)
## Iteration: 30 (-135163.6737, 0.0150)
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## Iteration: 40 (-135163.4764, 0.0148)
## Iteration: 50 (-135163.2860, 0.0146)
## Group probs = (0.8103, 0.1398, 0.0499)
##
## Outer iteration: 19
## Iteration: 1 (-135354.3627, 0.0628)
## Iteration: 10 (-135354.1800, 0.0146)
## Iteration: 20 (-135353.9963, 0.0144)
## Iteration: 30 (-135353.8180, 0.0142)
## Iteration: 40 (-135353.6443, 0.0140)
## Iteration: 50 (-135353.4747, 0.0139)
## Group probs = (0.8126, 0.1382, 0.0492)
##
## Outer iteration: 20
## Iteration: 1 (-135957.3035, 0.0414)
## Iteration: 10 (-135957.0363, 0.0138)
## Iteration: 20 (-135956.8463, 0.0135)
## Iteration: 30 (-135956.6738, 0.0134)
## Iteration: 40 (-135956.5104, 0.0133)
## Iteration: 50 (-135956.3532, 0.0131)
## Group probs = (0.8121, 0.1394, 0.0485)
##
## Outer iteration: 21
## Iteration: 1 (-135885.5171, 0.1016)
## Iteration: 10 (-135885.3306, 0.0132)
## Iteration: 20 (-135885.1570, 0.0131)
## Iteration: 30 (-135884.9946, 0.0129)
## Iteration: 40 (-135884.8396, 0.0128)
## Iteration: 50 (-135884.6905, 0.0126)
## Group probs = (0.8110, 0.1400, 0.0490)
##
## Outer iteration: 22
## Iteration: 1 (-135569.7326, 0.0399)
## Iteration: 10 (-135569.5860, 0.0127)
## Iteration: 20 (-135569.4464, 0.0124)
## Iteration: 30 (-135569.3108, 0.0123)
## Iteration: 40 (-135569.1784, 0.0122)
## Iteration: 50 (-135569.0487, 0.0120)
## Group probs = (0.8120, 0.1393, 0.0487)
##
## Outer iteration: 23
## Iteration: 1 (-135863.6199, 0.0269)
## Iteration: 10 (-135863.4856, 0.0120)
## Iteration: 20 (-135863.3580, 0.0118)
## Iteration: 30 (-135863.2340, 0.0117)
## Iteration: 40 (-135863.1129, 0.0116)
## Iteration: 50 (-135862.9943, 0.0115)
## Group probs = (0.8108, 0.1402, 0.0490)
##
## Outer iteration: 24
## Iteration: 1 (-135580.5551, 0.0539)
## Iteration: 10 (-135580.4168, 0.0117)
## Iteration: 20 (-135580.2909, 0.0115)
## Iteration: 30 (-135580.1713, 0.0113)

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## Iteration: 40 (-135580.0556, 0.0112)
## Iteration: 50 (-135579.9430, 0.0111)
## Group probs = (0.8114, 0.1392, 0.0494)
##
## Outer iteration: 25
## Iteration: 1 (-135656.0156, 0.0956)
## Iteration: 10 (-135655.8954, 0.0110)
## Iteration: 20 (-135655.7833, 0.0109)
## Iteration: 30 (-135655.6765, 0.0108)
## Iteration: 40 (-135655.5732, 0.0107)
## Iteration: 50 (-135655.4725, 0.0106)
## Group probs = (0.8113, 0.1399, 0.0488)
##
## Outer iteration: 26
## Iteration: 1 (-135706.6495, 0.0988)
## Iteration: 10 (-135706.5374, 0.0106)
## Iteration: 20 (-135706.4317, 0.0105)
## Iteration: 30 (-135706.3304, 0.0104)
## Iteration: 40 (-135706.2320, 0.0103)
## Iteration: 50 (-135706.1359, 0.0102)
## Group probs = (0.8109, 0.1399, 0.0492)
##
## Outer iteration: 27
## Iteration: 1 (-135601.1417, 0.0179)
## Iteration: 10 (-135601.0528, 0.0102)
## Iteration: 20 (-135600.9606, 0.0101)
## Iteration: 30 (-135600.8704, 0.0100)
## Iteration: 40 (-135600.7820, 0.0099)
## Iteration: 50 (-135600.6951, 0.0098)
## Group probs = (0.8100, 0.1393, 0.0508)
##
## Outer iteration: 28
## Iteration: 1 (-135182.8729, 0.1603)
## Iteration: 10 (-135182.6949, 0.0104)
## Iteration: 20 (-135182.5744, 0.0100)
## Iteration: 30 (-135182.4697, 0.0098)
## Iteration: 40 (-135182.3744, 0.0096)
## Iteration: 50 (-135182.2852, 0.0095)
## Group probs = (0.8100, 0.1405, 0.0495)
##
## Outer iteration: 29
## Iteration: 1 (-135339.5004, 0.1347)
## Iteration: 10 (-135339.3790, 0.0094)
## Iteration: 20 (-135339.2856, 0.0093)
## Iteration: 30 (-135339.1998, 0.0092)
## Iteration: 40 (-135339.1183, 0.0091)
## Iteration: 50 (-135339.0396, 0.0091)
## Group probs = (0.8082, 0.1424, 0.0495)
##
## Outer iteration: 30
## Iteration: 1 (-134920.6129, 0.0902)
## Iteration: 10 (-134920.4554, 0.0096)
## Iteration: 20 (-134920.3503, 0.0093)
## Iteration: 30 (-134920.2586, 0.0091)
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## Iteration: 40 (-134920.1741, 0.0090)
## Iteration: 50 (-134920.0942, 0.0089)
## Group probs = (0.8079, 0.1420, 0.0501)
##
## Outer iteration: 31
## Iteration: 1 (-134768.4845, 0.0958)
## Iteration: 10 (-134768.3991, 0.0089)
## Iteration: 20 (-134768.3244, 0.0088)
## Iteration: 30 (-134768.2532, 0.0087)
## Iteration: 40 (-134768.1841, 0.0086)
## Iteration: 50 (-134768.1165, 0.0086)
## Group probs = (0.8088, 0.1409, 0.0503)
##
## Outer iteration: 32
## Iteration: 1 (-134982.1437, 0.0441)
## Iteration: 10 (-134982.0549, 0.0087)
## Iteration: 20 (-134981.9809, 0.0085)
## Iteration: 30 (-134981.9119, 0.0084)
## Iteration: 40 (-134981.8458, 0.0084)
## Iteration: 50 (-134981.7818, 0.0083)
## Group probs = (0.8086, 0.1415, 0.0499)
##
## Outer iteration: 33
## Iteration: 1 (-134975.1458, 0.0790)
## Iteration: 10 (-134975.0731, 0.0083)
## Iteration: 20 (-134975.0077, 0.0082)
## Iteration: 30 (-134974.9451, 0.0081)
## Iteration: 40 (-134974.8842, 0.0081)
## Iteration: 50 (-134974.8245, 0.0080)
## Group probs = (0.8066, 0.1431, 0.0503)
##
## Outer iteration: 34
## Iteration: 1 (-134435.5640, 0.0084)
## Iteration: 10 (-134435.4422, 0.0083)
## Iteration: 20 (-134435.3737, 0.0080)
## Iteration: 30 (-134435.3113, 0.0079)
## Iteration: 40 (-134435.2518, 0.0079)
## Iteration: 50 (-134435.1941, 0.0078)
## Group probs = (0.8075, 0.1422, 0.0503)
##
## Outer iteration: 35
## Iteration: 1 (-134641.5349, 0.0708)
## Iteration: 10 (-134641.4589, 0.0079)
## Iteration: 20 (-134641.3964, 0.0078)
## Iteration: 30 (-134641.3385, 0.0077)
## Iteration: 40 (-134641.2828, 0.0076)
## Iteration: 50 (-134641.2287, 0.0076)
## Group probs = (0.8080, 0.1418, 0.0502)
##
## Outer iteration: 36
## Iteration: 1 (-134752.2271, 0.0255)
## Iteration: 10 (-134752.1710, 0.0076)
## Iteration: 20 (-134752.1164, 0.0075)
## Iteration: 30 (-134752.0640, 0.0074)
```

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## Iteration: 40 (-134752.0130, 0.0074)
## Iteration: 50 (-134751.9630, 0.0073)
## Group probs = (0.8074, 0.1415, 0.0511)
##
## Outer iteration: 37
## Iteration: 1 (-134480.9831, 0.1004)
## Iteration: 10 (-134480.8954, 0.0077)
## Iteration: 20 (-134480.8302, 0.0074)
## Iteration: 30 (-134480.7718, 0.0073)
## Iteration: 40 (-134480.7175, 0.0072)
## Iteration: 50 (-134480.6661, 0.0072)
## Group probs = (0.8082, 0.1405, 0.0513)
##
## Outer iteration: 38
## Iteration: 1 (-134659.5298, 0.0429)
## Iteration: 10 (-134659.4518, 0.0074)
## Iteration: 20 (-134659.3903, 0.0073)
## Iteration: 30 (-134659.3350, 0.0071)
## Iteration: 40 (-134659.2837, 0.0071)
## Iteration: 50 (-134659.2352, 0.0070)
## Group probs = (0.8087, 0.1408, 0.0505)
##
## Outer iteration: 39
## Iteration: 1 (-134889.1584, 0.1159)
## Iteration: 10 (-134889.0864, 0.0070)
## Iteration: 20 (-134889.0377, 0.0069)
## Iteration: 30 (-134888.9925, 0.0068)
## Iteration: 40 (-134888.9490, 0.0067)
## Iteration: 50 (-134888.9066, 0.0067)
## Group probs = (0.8097, 0.1404, 0.0499)
##
## Outer iteration: 40
## Iteration: 1 (-135156.0499, 0.0068)
## Iteration: 10 (-135155.9850, 0.0068)
## Iteration: 20 (-135155.9374, 0.0066)
## Iteration: 30 (-135155.8934, 0.0066)
## Iteration: 40 (-135155.8514, 0.0066)
## Iteration: 50 (-135155.8105, 0.0065)
## Group probs = (0.8127, 0.1379, 0.0495)
##
## Outer iteration: 1
## Iteration: 1 (-153536.8055,   Inf)
## Iteration: 10 (-138776.1390, 2.6408)
## Iteration: 20 (-137576.5391, 1.1456)
## Iteration: 30 (-137179.8657, 0.7008)
## Iteration: 40 (-136991.6005, 0.4914)
## Iteration: 50 (-136885.2142, 0.3719)
## Group probs = (0.8184, 0.1359, 0.0457)
##
## Outer iteration: 2
## Iteration: 1 (-137739.2821, 0.4131)
## Iteration: 10 (-137686.2311, 0.2853)
## Iteration: 20 (-137645.7377, 0.2341)
## Iteration: 30 (-137616.6341, 0.1979)

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## Iteration: 40 (-137594.6938, 0.1710)
## Iteration: 50 (-137577.5269, 0.1504)
## Group probs = (0.8172, 0.1365, 0.0463)
##
## Outer iteration: 3
## Iteration: 1 (-137159.9120, 0.1539)
## Iteration: 10 (-137146.9101, 0.1366)
## Iteration: 20 (-137135.1288, 0.1226)
## Iteration: 30 (-137125.3694, 0.1113)
## Iteration: 40 (-137117.1278, 0.1019)
## Iteration: 50 (-137110.0606, 0.0940)
## Group probs = (0.8182, 0.1356, 0.0461)
##
## Outer iteration: 4
## Iteration: 1 (-137423.3111, 0.0959)
## Iteration: 10 (-137417.5578, 0.0887)
## Iteration: 20 (-137411.9633, 0.0826)
## Iteration: 30 (-137407.0284, 0.0774)
## Iteration: 40 (-137402.6390, 0.0728)
## Iteration: 50 (-137398.7080, 0.0688)
## Group probs = (0.8178, 0.1355, 0.0467)
##
## Outer iteration: 5
## Iteration: 1 (-137216.2649, 0.0769)
## Iteration: 10 (-137212.9684, 0.0656)
## Iteration: 20 (-137209.6563, 0.0624)
## Iteration: 30 (-137206.6500, 0.0594)
## Iteration: 40 (-137203.9083, 0.0568)
## Iteration: 50 (-137201.3978, 0.0543)
## Group probs = (0.8175, 0.1356, 0.0469)
##
## Outer iteration: 6
## Iteration: 1 (-137124.3080, 0.0541)
## Iteration: 10 (-137122.1360, 0.0524)
## Iteration: 20 (-137119.9138, 0.0505)
## Iteration: 30 (-137117.8635, 0.0486)
## Iteration: 40 (-137115.9655, 0.0468)
## Iteration: 50 (-137114.2032, 0.0452)
## Group probs = (0.8174, 0.1361, 0.0466)
##
## Outer iteration: 7
## Iteration: 1 (-137141.2422, 0.0821)
## Iteration: 10 (-137139.6728, 0.0441)
## Iteration: 20 (-137138.0534, 0.0427)
## Iteration: 30 (-137136.5441, 0.0414)
## Iteration: 40 (-137135.1332, 0.0401)
## Iteration: 50 (-137133.8109, 0.0389)
## Group probs = (0.8172, 0.1360, 0.0468)
##
## Outer iteration: 8
## Iteration: 1 (-137075.5604, 0.0402)
## Iteration: 10 (-137074.3990, 0.0378)
## Iteration: 20 (-137073.1883, 0.0368)
## Iteration: 30 (-137072.0498, 0.0358)
```

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## Iteration: 40 (-137070.9765, 0.0349)
## Iteration: 50 (-137069.9629, 0.0340)
## Group probs = (0.8180, 0.1362, 0.0458)
##
## Outer iteration: 9
## Iteration: 1 (-137372.5357, 0.1053)
## Iteration: 10 (-137371.5530, 0.0334)
## Iteration: 20 (-137370.5561, 0.0327)
## Iteration: 30 (-137369.6207, 0.0320)
## Iteration: 40 (-137368.7383, 0.0312)
## Iteration: 50 (-137367.9033, 0.0305)
## Group probs = (0.8161, 0.1370, 0.0469)
##
## Outer iteration: 10
## Iteration: 1 (-136783.1454, 0.1116)
## Iteration: 10 (-136782.3616, 0.0299)
## Iteration: 20 (-136781.6042, 0.0291)
## Iteration: 30 (-136780.8866, 0.0284)
## Iteration: 40 (-136780.2032, 0.0278)
## Iteration: 50 (-136779.5509, 0.0272)
## Group probs = (0.8163, 0.1375, 0.0462)
##
## Outer iteration: 11
## Iteration: 1 (-136878.9644, 0.0519)
## Iteration: 10 (-136878.3716, 0.0266)
## Iteration: 20 (-136877.7493, 0.0262)
## Iteration: 30 (-136877.1552, 0.0257)
## Iteration: 40 (-136876.5867, 0.0252)
## Iteration: 50 (-136876.0417, 0.0247)
## Group probs = (0.8143, 0.1394, 0.0463)
##
## Outer iteration: 12
## Iteration: 1 (-136365.9897, 0.0569)
## Iteration: 10 (-136365.4237, 0.0248)
## Iteration: 20 (-136364.8851, 0.0242)
## Iteration: 30 (-136364.3744, 0.0237)
## Iteration: 40 (-136363.8861, 0.0233)
## Iteration: 50 (-136363.4177, 0.0228)
## Group probs = (0.8163, 0.1382, 0.0455)
##
## Outer iteration: 13
## Iteration: 1 (-136950.3377, 0.0300)
## Iteration: 10 (-136949.8491, 0.0224)
## Iteration: 20 (-136949.3894, 0.0221)
## Iteration: 30 (-136948.9527, 0.0217)
## Iteration: 40 (-136948.5342, 0.0214)
## Iteration: 50 (-136948.1316, 0.0210)
## Group probs = (0.8151, 0.1390, 0.0458)
##
## Outer iteration: 14
## Iteration: 1 (-136667.7063, 0.0451)
## Iteration: 10 (-136667.3246, 0.0210)
## Iteration: 20 (-136666.9338, 0.0206)
## Iteration: 30 (-136666.5593, 0.0202)

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## Iteration: 40 (-136666.1988, 0.0199)
## Iteration: 50 (-136665.8508, 0.0196)
## Group probs = (0.8170, 0.1370, 0.0460)
##
## Outer iteration: 15
## Iteration: 1 (-137082.7807, 0.0854)
## Iteration: 10 (-137082.4021, 0.0192)
## Iteration: 20 (-137082.0585, 0.0189)
## Iteration: 30 (-137081.7347, 0.0187)
## Iteration: 40 (-137081.4246, 0.0184)
## Iteration: 50 (-137081.1258, 0.0181)
## Group probs = (0.8164, 0.1367, 0.0468)
##
## Outer iteration: 16
## Iteration: 1 (-136838.8417, 0.0998)
## Iteration: 10 (-136838.5471, 0.0180)
## Iteration: 20 (-136838.2575, 0.0176)
## Iteration: 30 (-136837.9818, 0.0173)
## Iteration: 40 (-136837.7168, 0.0171)
## Iteration: 50 (-136837.4609, 0.0168)
## Group probs = (0.8166, 0.1370, 0.0464)
##
## Outer iteration: 17
## Iteration: 1 (-136930.2978, 0.0362)
## Iteration: 10 (-136930.0689, 0.0165)
## Iteration: 20 (-136929.8257, 0.0164)
## Iteration: 30 (-136929.5896, 0.0162)
## Iteration: 40 (-136929.3599, 0.0160)
## Iteration: 50 (-136929.1361, 0.0158)
## Group probs = (0.8157, 0.1384, 0.0459)
##
## Outer iteration: 18
## Iteration: 1 (-136757.1511, 0.0761)
## Iteration: 10 (-136756.9066, 0.0157)
## Iteration: 20 (-136756.6708, 0.0156)
## Iteration: 30 (-136756.4461, 0.0154)
## Iteration: 40 (-136756.2296, 0.0152)
## Iteration: 50 (-136756.0200, 0.0150)
## Group probs = (0.8152, 0.1392, 0.0456)
##
## Outer iteration: 19
## Iteration: 1 (-136706.1207, 0.1020)
## Iteration: 10 (-136705.8880, 0.0153)
## Iteration: 20 (-136705.6650, 0.0150)
## Iteration: 30 (-136705.4551, 0.0148)
## Iteration: 40 (-136705.2540, 0.0146)
## Iteration: 50 (-136705.0600, 0.0144)
## Group probs = (0.8165, 0.1383, 0.0451)
##
## Outer iteration: 20
## Iteration: 1 (-137108.9628, 0.0389)
## Iteration: 10 (-137108.7485, 0.0143)
## Iteration: 20 (-137108.5519, 0.0141)
## Iteration: 30 (-137108.3638, 0.0140)
```

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## Iteration: 40 (-137108.1821, 0.0138)
## Iteration: 50 (-137108.0060, 0.0137)
## Group probs = (0.8153, 0.1387, 0.0460)
##
## Outer iteration: 21
## Iteration: 1 (-136722.5679, 0.0721)
## Iteration: 10 (-136722.3847, 0.0136)
## Iteration: 20 (-136722.2186, 0.0133)
## Iteration: 30 (-136722.0581, 0.0132)
## Iteration: 40 (-136721.9016, 0.0130)
## Iteration: 50 (-136721.7487, 0.0129)
## Group probs = (0.8144, 0.1395, 0.0461)
##
## Outer iteration: 22
## Iteration: 1 (-136527.8286, 0.0897)
## Iteration: 10 (-136527.6469, 0.0132)
## Iteration: 20 (-136527.4825, 0.0129)
## Iteration: 30 (-136527.3277, 0.0127)
## Iteration: 40 (-136527.1787, 0.0126)
## Iteration: 50 (-136527.0341, 0.0124)
## Group probs = (0.8138, 0.1396, 0.0466)
##
## Outer iteration: 23
## Iteration: 1 (-136318.6874, 0.0560)
## Iteration: 10 (-136318.5459, 0.0124)
## Iteration: 20 (-136318.4049, 0.0122)
## Iteration: 30 (-136318.2686, 0.0121)
## Iteration: 40 (-136318.1359, 0.0119)
## Iteration: 50 (-136318.0063, 0.0118)
## Group probs = (0.8125, 0.1402, 0.0474)
##
## Outer iteration: 24
## Iteration: 1 (-135890.6829, 0.0846)
## Iteration: 10 (-135890.5120, 0.0121)
## Iteration: 20 (-135890.3735, 0.0118)
## Iteration: 30 (-135890.2436, 0.0116)
## Iteration: 40 (-135890.1192, 0.0114)
## Iteration: 50 (-135889.9990, 0.0113)
## Group probs = (0.8124, 0.1411, 0.0465)
##
## Outer iteration: 25
## Iteration: 1 (-135963.5701, 0.0950)
## Iteration: 10 (-135963.4395, 0.0112)
## Iteration: 20 (-135963.3171, 0.0111)
## Iteration: 30 (-135963.1999, 0.0110)
## Iteration: 40 (-135963.0861, 0.0109)
## Iteration: 50 (-135962.9752, 0.0108)
## Group probs = (0.8137, 0.1396, 0.0467)
##
## Outer iteration: 26
## Iteration: 1 (-136285.8916, 0.0799)
## Iteration: 10 (-136285.7423, 0.0109)
## Iteration: 20 (-136285.6246, 0.0107)
## Iteration: 30 (-136285.5154, 0.0106)

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## Iteration: 40 (-136285.4107, 0.0105)
## Iteration: 50 (-136285.3091, 0.0104)
## Group probs = (0.8127, 0.1408, 0.0465)
##
## Outer iteration: 27
## Iteration: 1 (-136043.9433, 0.0738)
## Iteration: 10 (-136043.8180, 0.0103)
## Iteration: 20 (-136043.7110, 0.0102)
## Iteration: 30 (-136043.6097, 0.0101)
## Iteration: 40 (-136043.5118, 0.0100)
## Iteration: 50 (-136043.4165, 0.0100)
## Group probs = (0.8138, 0.1398, 0.0464)
##
## Outer iteration: 28
## Iteration: 1 (-136335.7577, 0.0286)
## Iteration: 10 (-136335.6513, 0.0099)
## Iteration: 20 (-136335.5562, 0.0098)
## Iteration: 30 (-136335.4648, 0.0098)
## Iteration: 40 (-136335.3756, 0.0097)
## Iteration: 50 (-136335.2882, 0.0096)
## Group probs = (0.8131, 0.1401, 0.0468)
##
## Outer iteration: 29
## Iteration: 1 (-136116.5671, 0.0114)
## Iteration: 10 (-136116.4756, 0.0097)
## Iteration: 20 (-136116.3883, 0.0095)
## Iteration: 30 (-136116.3042, 0.0094)
## Iteration: 40 (-136116.2221, 0.0094)
## Iteration: 50 (-136116.1415, 0.0093)
## Group probs = (0.8140, 0.1396, 0.0464)
##
## Outer iteration: 30
## Iteration: 1 (-136323.1571, 0.0443)
## Iteration: 10 (-136323.0588, 0.0093)
## Iteration: 20 (-136322.9741, 0.0092)
## Iteration: 30 (-136322.8943, 0.0091)
## Iteration: 40 (-136322.8170, 0.0090)
## Iteration: 50 (-136322.7414, 0.0089)
## Group probs = (0.8162, 0.1381, 0.0457)
##
## Outer iteration: 31
## Iteration: 1 (-136932.7075, 0.0183)
## Iteration: 10 (-136932.5479, 0.0091)
## Iteration: 20 (-136932.4568, 0.0089)
## Iteration: 30 (-136932.3761, 0.0088)
## Iteration: 40 (-136932.3002, 0.0087)
## Iteration: 50 (-136932.2274, 0.0087)
## Group probs = (0.8141, 0.1393, 0.0465)
##
## Outer iteration: 32
## Iteration: 1 (-136328.1951, 0.0370)
## Iteration: 10 (-136328.0686, 0.0089)
## Iteration: 20 (-136327.9942, 0.0086)
## Iteration: 30 (-136327.9248, 0.0085)
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## Iteration: 40 (-136327.8577, 0.0084)
## Iteration: 50 (-136327.7921, 0.0083)
## Group probs = (0.8141, 0.1398, 0.0461)
##
## Outer iteration: 33
## Iteration: 1 (-136385.9505, 0.0546)
## Iteration: 10 (-136385.8823, 0.0084)
## Iteration: 20 (-136385.8146, 0.0083)
## Iteration: 30 (-136385.7492, 0.0082)
## Iteration: 40 (-136385.6854, 0.0082)
## Iteration: 50 (-136385.6227, 0.0081)
## Group probs = (0.8139, 0.1401, 0.0459)
##
## Outer iteration: 34
## Iteration: 1 (-136408.3164, 0.0761)
## Iteration: 10 (-136408.2352, 0.0084)
## Iteration: 20 (-136408.1646, 0.0082)
## Iteration: 30 (-136408.0985, 0.0081)
## Iteration: 40 (-136408.0349, 0.0080)
## Iteration: 50 (-136407.9730, 0.0080)
## Group probs = (0.8149, 0.1392, 0.0458)
##
## Outer iteration: 35
## Iteration: 1 (-136649.0233, 0.0274)
## Iteration: 10 (-136648.9527, 0.0079)
## Iteration: 20 (-136648.8912, 0.0078)
## Iteration: 30 (-136648.8321, 0.0078)
## Iteration: 40 (-136648.7744, 0.0077)
## Iteration: 50 (-136648.7176, 0.0077)
## Group probs = (0.8148, 0.1390, 0.0462)
##
## Outer iteration: 36
## Iteration: 1 (-136572.2795, 0.0327)
## Iteration: 10 (-136572.2250, 0.0076)
## Iteration: 20 (-136572.1691, 0.0076)
## Iteration: 30 (-136572.1146, 0.0075)
## Iteration: 40 (-136572.0610, 0.0075)
## Iteration: 50 (-136572.0083, 0.0074)
## Group probs = (0.8145, 0.1397, 0.0458)
##
## Outer iteration: 37
## Iteration: 1 (-136600.9279, 0.1121)
## Iteration: 10 (-136600.8393, 0.0079)
## Iteration: 20 (-136600.7735, 0.0076)
## Iteration: 30 (-136600.7141, 0.0075)
## Iteration: 40 (-136600.6580, 0.0074)
## Iteration: 50 (-136600.6039, 0.0073)
## Group probs = (0.8148, 0.1391, 0.0461)
##
## Outer iteration: 38
## Iteration: 1 (-136669.9921, 0.0417)
## Iteration: 10 (-136669.9377, 0.0072)
## Iteration: 20 (-136669.8858, 0.0072)
## Iteration: 30 (-136669.8356, 0.0071)
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## Iteration: 40 (-136669.7863, 0.0071)
## Iteration: 50 (-136669.7378, 0.0071)
## Group probs = (0.8145, 0.1392, 0.0463)
##
## Outer iteration: 39
## Iteration: 1 (-136557.1331, 0.0140)
## Iteration: 10 (-136557.0863, 0.0070)
## Iteration: 20 (-136557.0388, 0.0070)
## Iteration: 30 (-136556.9922, 0.0069)
## Iteration: 40 (-136556.9463, 0.0069)
## Iteration: 50 (-136556.9011, 0.0069)
## Group probs = (0.8148, 0.1386, 0.0465)
##
## Outer iteration: 40
## Iteration: 1 (-136548.5309, 0.0915)
## Iteration: 10 (-136548.4631, 0.0070)
## Iteration: 20 (-136548.4080, 0.0069)
## Iteration: 30 (-136548.3582, 0.0068)
## Iteration: 40 (-136548.3113, 0.0068)
## Iteration: 50 (-136548.2661, 0.0067)
## Group probs = (0.8139, 0.1404, 0.0457)
##
## Outer iteration: 1
## Iteration: 1 (-153417.5013,   Inf)
## Iteration: 10 (-138718.4977, 2.6310)
## Iteration: 20 (-137533.7853, 1.1399)
## Iteration: 30 (-137143.4631, 0.6968)
## Iteration: 40 (-136958.6015, 0.4882)
## Iteration: 50 (-136854.2594, 0.3692)
## Group probs = (0.8178, 0.1358, 0.0464)
##
## Outer iteration: 2
## Iteration: 1 (-137509.5918, 0.4356)
## Iteration: 10 (-137458.3735, 0.2817)
## Iteration: 20 (-137419.3000, 0.2310)
## Iteration: 30 (-137391.2159, 0.1952)
## Iteration: 40 (-137370.0362, 0.1687)
## Iteration: 50 (-137353.4591, 0.1483)
## Group probs = (0.8184, 0.1351, 0.0465)
##
## Outer iteration: 3
## Iteration: 1 (-137451.5227, 0.1538)
## Iteration: 10 (-137439.1915, 0.1339)
## Iteration: 20 (-137427.9402, 0.1204)
## Iteration: 30 (-137418.5759, 0.1094)
## Iteration: 40 (-137410.6434, 0.1003)
## Iteration: 50 (-137403.8288, 0.0926)
## Group probs = (0.8178, 0.1352, 0.0471)
##
## Outer iteration: 4
## Iteration: 1 (-137167.7507, 0.1162)
## Iteration: 10 (-137162.2477, 0.0868)
## Iteration: 20 (-137156.8909, 0.0810)
## Iteration: 30 (-137152.1701, 0.0759)

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## Iteration: 40 (-137147.9759, 0.0715)
## Iteration: 50 (-137144.2244, 0.0675)
## Group probs = (0.8182, 0.1347, 0.0471)
##
## Outer iteration: 5
## Iteration: 1 (-137266.1056, 0.0681)
## Iteration: 10 (-137262.9356, 0.0645)
## Iteration: 20 (-137259.7450, 0.0614)
## Iteration: 30 (-137256.8511, 0.0585)
## Iteration: 40 (-137254.2150, 0.0559)
## Iteration: 50 (-137251.8041, 0.0535)
## Group probs = (0.8190, 0.1340, 0.0470)
##
## Outer iteration: 6
## Iteration: 1 (-137443.2729, 0.0672)
## Iteration: 10 (-137441.1612, 0.0511)
## Iteration: 20 (-137439.0195, 0.0494)
## Iteration: 30 (-137437.0508, 0.0476)
## Iteration: 40 (-137435.2329, 0.0460)
## Iteration: 50 (-137433.5483, 0.0444)
## Group probs = (0.8200, 0.1336, 0.0464)
##
## Outer iteration: 7
## Iteration: 1 (-137780.9635, 0.0714)
## Iteration: 10 (-137779.4414, 0.0431)
## Iteration: 20 (-137777.8913, 0.0418)
## Iteration: 30 (-137776.4509, 0.0405)
## Iteration: 40 (-137775.1074, 0.0393)
## Iteration: 50 (-137773.8506, 0.0381)
## Group probs = (0.8199, 0.1338, 0.0462)
##
## Outer iteration: 8
## Iteration: 1 (-137756.5194, 0.0404)
## Iteration: 10 (-137755.3976, 0.0371)
## Iteration: 20 (-137754.2337, 0.0362)
## Iteration: 30 (-137753.1428, 0.0352)
## Iteration: 40 (-137752.1168, 0.0343)
## Iteration: 50 (-137751.1495, 0.0334)
## Group probs = (0.8185, 0.1353, 0.0461)
##
## Outer iteration: 9
## Iteration: 1 (-137446.6552, 0.1068)
## Iteration: 10 (-137445.7273, 0.0332)
## Iteration: 20 (-137444.7966, 0.0323)
## Iteration: 30 (-137443.9240, 0.0314)
## Iteration: 40 (-137443.1004, 0.0306)
## Iteration: 50 (-137442.3207, 0.0299)
## Group probs = (0.8168, 0.1361, 0.0472)
##
## Outer iteration: 10
## Iteration: 1 (-136873.4131, 0.1132)
## Iteration: 10 (-136872.6615, 0.0293)
## Iteration: 20 (-136871.9436, 0.0285)
## Iteration: 30 (-136871.2649, 0.0278)
```

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## Iteration: 40 (-136870.6196, 0.0272)
## Iteration: 50 (-136870.0044, 0.0266)
## Group probs = (0.8175, 0.1361, 0.0464)
##
## Outer iteration: 11
## Iteration: 1 (-137122.4018, 0.0714)
## Iteration: 10 (-137121.8407, 0.0261)
## Iteration: 20 (-137121.2572, 0.0257)
## Iteration: 30 (-137120.7001, 0.0252)
## Iteration: 40 (-137120.1671, 0.0247)
## Iteration: 50 (-137119.6562, 0.0242)
## Group probs = (0.8188, 0.1355, 0.0458)
##
## Outer iteration: 12
## Iteration: 1 (-137499.1565, 0.0290)
## Iteration: 10 (-137498.6594, 0.0237)
## Iteration: 20 (-137498.1610, 0.0234)
## Iteration: 30 (-137497.6865, 0.0230)
## Iteration: 40 (-137497.2322, 0.0226)
## Iteration: 50 (-137496.7962, 0.0222)
## Group probs = (0.8191, 0.1346, 0.0463)
##
## Outer iteration: 13
## Iteration: 1 (-137520.9810, 0.0723)
## Iteration: 10 (-137520.5809, 0.0218)
## Iteration: 20 (-137520.1690, 0.0214)
## Iteration: 30 (-137519.7755, 0.0211)
## Iteration: 40 (-137519.3977, 0.0207)
## Iteration: 50 (-137519.0340, 0.0204)
## Group probs = (0.8198, 0.1344, 0.0458)
##
## Outer iteration: 14
## Iteration: 1 (-137751.2515, 0.0427)
## Iteration: 10 (-137750.9106, 0.0200)
## Iteration: 20 (-137750.5580, 0.0198)
## Iteration: 30 (-137750.2190, 0.0195)
## Iteration: 40 (-137749.8919, 0.0192)
## Iteration: 50 (-137749.5758, 0.0189)
## Group probs = (0.8190, 0.1346, 0.0464)
##
## Outer iteration: 15
## Iteration: 1 (-137491.2001, 0.0334)
## Iteration: 10 (-137490.9122, 0.0187)
## Iteration: 20 (-137490.6154, 0.0184)
## Iteration: 30 (-137490.3285, 0.0181)
## Iteration: 40 (-137490.0505, 0.0178)
## Iteration: 50 (-137489.7808, 0.0176)
## Group probs = (0.8183, 0.1360, 0.0457)
##
## Outer iteration: 16
## Iteration: 1 (-137418.8625, 0.1261)
## Iteration: 10 (-137418.5585, 0.0177)
## Iteration: 20 (-137418.2693, 0.0174)
## Iteration: 30 (-137417.9968, 0.0171)
```

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## Iteration: 40 (-137417.7363, 0.0168)
## Iteration: 50 (-137417.4856, 0.0166)
## Group probs = (0.8194, 0.1347, 0.0459)
##
## Outer iteration: 17
## Iteration: 1 (-137641.0270, 0.1049)
## Iteration: 10 (-137640.7698, 0.0163)
## Iteration: 20 (-137640.5292, 0.0161)
## Iteration: 30 (-137640.3008, 0.0159)
## Iteration: 40 (-137640.0804, 0.0157)
## Iteration: 50 (-137639.8666, 0.0155)
## Group probs = (0.8193, 0.1349, 0.0458)
##
## Outer iteration: 18
## Iteration: 1 (-137624.4099, 0.0387)
## Iteration: 10 (-137624.2145, 0.0153)
## Iteration: 20 (-137624.0079, 0.0152)
## Iteration: 30 (-137623.8076, 0.0150)
## Iteration: 40 (-137623.6126, 0.0148)
## Iteration: 50 (-137623.4226, 0.0147)
## Group probs = (0.8216, 0.1337, 0.0447)
##
## Outer iteration: 19
## Iteration: 1 (-138322.0971, 0.0711)
## Iteration: 10 (-138321.8068, 0.0148)
## Iteration: 20 (-138321.5986, 0.0145)
## Iteration: 30 (-138321.4041, 0.0143)
## Iteration: 40 (-138321.2183, 0.0142)
## Iteration: 50 (-138321.0391, 0.0140)
## Group probs = (0.8203, 0.1342, 0.0454)
##
## Outer iteration: 20
## Iteration: 1 (-137974.6984, 0.0195)
## Iteration: 10 (-137974.5190, 0.0140)
## Iteration: 20 (-137974.3489, 0.0137)
## Iteration: 30 (-137974.1851, 0.0135)
## Iteration: 40 (-137974.0257, 0.0133)
## Iteration: 50 (-137973.8702, 0.0132)
## Group probs = (0.8192, 0.1348, 0.0460)
##
## Outer iteration: 21
## Iteration: 1 (-137627.5511, 0.0331)
## Iteration: 10 (-137627.3832, 0.0131)
## Iteration: 20 (-137627.2287, 0.0129)
## Iteration: 30 (-137627.0797, 0.0128)
## Iteration: 40 (-137626.9348, 0.0127)
## Iteration: 50 (-137626.7935, 0.0125)
## Group probs = (0.8187, 0.1356, 0.0457)
##
## Outer iteration: 22
## Iteration: 1 (-137545.3874, 0.0529)
## Iteration: 10 (-137545.2465, 0.0126)
## Iteration: 20 (-137545.1033, 0.0124)
## Iteration: 30 (-137544.9652, 0.0123)
```

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## Iteration: 40 (-137544.8309, 0.0121)
## Iteration: 50 (-137544.7000, 0.0120)
## Group probs = (0.8198, 0.1343, 0.0459)
##
## Outer iteration: 23
## Iteration: 1 (-137785.5318, 0.0553)
## Iteration: 10 (-137785.3926, 0.0119)
## Iteration: 20 (-137785.2629, 0.0118)
## Iteration: 30 (-137785.1388, 0.0116)
## Iteration: 40 (-137785.0183, 0.0115)
## Iteration: 50 (-137784.9006, 0.0114)
## Group probs = (0.8195, 0.1342, 0.0463)
##
## Outer iteration: 24
## Iteration: 1 (-137634.5285, 0.0812)
## Iteration: 10 (-137634.3999, 0.0114)
## Iteration: 20 (-137634.2788, 0.0113)
## Iteration: 30 (-137634.1637, 0.0111)
## Iteration: 40 (-137634.0526, 0.0110)
## Iteration: 50 (-137633.9446, 0.0109)
## Group probs = (0.8188, 0.1350, 0.0461)
##
## Outer iteration: 25
## Iteration: 1 (-137513.0484, 0.0546)
## Iteration: 10 (-137512.9413, 0.0109)
## Iteration: 20 (-137512.8353, 0.0108)
## Iteration: 30 (-137512.7328, 0.0106)
## Iteration: 40 (-137512.6326, 0.0105)
## Iteration: 50 (-137512.5345, 0.0105)
## Group probs = (0.8185, 0.1355, 0.0460)
##
## Outer iteration: 26
## Iteration: 1 (-137445.4137, 0.0324)
## Iteration: 10 (-137445.3188, 0.0104)
## Iteration: 20 (-137445.2204, 0.0103)
## Iteration: 30 (-137445.1247, 0.0102)
## Iteration: 40 (-137445.0310, 0.0102)
## Iteration: 50 (-137444.9391, 0.0101)
## Group probs = (0.8181, 0.1363, 0.0457)
##
## Outer iteration: 27
## Iteration: 1 (-137385.3043, 0.0545)
## Iteration: 10 (-137385.2052, 0.0101)
## Iteration: 20 (-137385.1068, 0.0100)
## Iteration: 30 (-137385.0125, 0.0099)
## Iteration: 40 (-137384.9211, 0.0098)
## Iteration: 50 (-137384.8321, 0.0097)
## Group probs = (0.8186, 0.1361, 0.0453)
##
## Outer iteration: 28
## Iteration: 1 (-137589.7249, 0.0760)
## Iteration: 10 (-137589.6167, 0.0099)
## Iteration: 20 (-137589.5199, 0.0098)
## Iteration: 30 (-137589.4286, 0.0096)
```

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## Iteration: 40 (-137589.3408, 0.0095)
## Iteration: 50 (-137589.2556, 0.0095)
## Group probs = (0.8191, 0.1355, 0.0454)
##
## Outer iteration: 29
## Iteration: 1 (-137703.4009, 0.0306)
## Iteration: 10 (-137703.3162, 0.0093)
## Iteration: 20 (-137703.2321, 0.0093)
## Iteration: 30 (-137703.1509, 0.0092)
## Iteration: 40 (-137703.0716, 0.0092)
## Iteration: 50 (-137702.9940, 0.0091)
## Group probs = (0.8184, 0.1356, 0.0460)
##
## Outer iteration: 30
## Iteration: 1 (-137455.1312, 0.0801)
## Iteration: 10 (-137455.0401, 0.0091)
## Iteration: 20 (-137454.9617, 0.0090)
## Iteration: 30 (-137454.8868, 0.0089)
## Iteration: 40 (-137454.8140, 0.0088)
## Iteration: 50 (-137454.7429, 0.0088)
## Group probs = (0.8176, 0.1366, 0.0457)
##
## Outer iteration: 31
## Iteration: 1 (-137299.8566, 0.0607)
## Iteration: 10 (-137299.7756, 0.0089)
## Iteration: 20 (-137299.7018, 0.0087)
## Iteration: 30 (-137299.6313, 0.0086)
## Iteration: 40 (-137299.5627, 0.0086)
## Iteration: 50 (-137299.4956, 0.0085)
## Group probs = (0.8171, 0.1362, 0.0467)
##
## Outer iteration: 32
## Iteration: 1 (-137059.9651, 0.0995)
## Iteration: 10 (-137059.8681, 0.0087)
## Iteration: 20 (-137059.7914, 0.0085)
## Iteration: 30 (-137059.7208, 0.0084)
## Iteration: 40 (-137059.6539, 0.0083)
## Iteration: 50 (-137059.5895, 0.0082)
## Group probs = (0.8204, 0.1345, 0.0451)
##
## Outer iteration: 33
## Iteration: 1 (-138041.7022, 0.0900)
## Iteration: 10 (-138041.4509, 0.0087)
## Iteration: 20 (-138041.3666, 0.0082)
## Iteration: 30 (-138041.2958, 0.0081)
## Iteration: 40 (-138041.2306, 0.0080)
## Iteration: 50 (-138041.1686, 0.0080)
## Group probs = (0.8198, 0.1349, 0.0453)
##
## Outer iteration: 34
## Iteration: 1 (-137872.8994, 0.0080)
## Iteration: 10 (-137872.8357, 0.0079)
## Iteration: 20 (-137872.7734, 0.0078)
## Iteration: 30 (-137872.7136, 0.0078)
```

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## Iteration: 40 (-137872.6555, 0.0077)
## Iteration: 50 (-137872.5987, 0.0077)
## Group probs = (0.8201, 0.1349, 0.0451)
##
## Outer iteration: 35
## Iteration: 1 (-137977.9581, 0.0351)
## Iteration: 10 (-137977.8984, 0.0077)
## Iteration: 20 (-137977.8389, 0.0077)
## Iteration: 30 (-137977.7819, 0.0076)
## Iteration: 40 (-137977.7265, 0.0076)
## Iteration: 50 (-137977.6725, 0.0075)
## Group probs = (0.8186, 0.1357, 0.0457)
##
## Outer iteration: 36
## Iteration: 1 (-137565.6691, 0.0090)
## Iteration: 10 (-137565.5824, 0.0078)
## Iteration: 20 (-137565.5240, 0.0075)
## Iteration: 30 (-137565.4700, 0.0074)
## Iteration: 40 (-137565.4180, 0.0074)
## Iteration: 50 (-137565.3673, 0.0073)
## Group probs = (0.8172, 0.1371, 0.0457)
##
## Outer iteration: 37
## Iteration: 1 (-137213.0132, 0.0442)
## Iteration: 10 (-137212.9182, 0.0076)
## Iteration: 20 (-137212.8560, 0.0074)
## Iteration: 30 (-137212.8003, 0.0073)
## Iteration: 40 (-137212.7478, 0.0072)
## Iteration: 50 (-137212.6973, 0.0072)
## Group probs = (0.8165, 0.1378, 0.0457)
##
## Outer iteration: 38
## Iteration: 1 (-137121.3886, 0.0538)
## Iteration: 10 (-137121.3161, 0.0075)
## Iteration: 20 (-137121.2566, 0.0072)
## Iteration: 30 (-137121.2032, 0.0071)
## Iteration: 40 (-137121.1529, 0.0071)
## Iteration: 50 (-137121.1044, 0.0070)
## Group probs = (0.8180, 0.1355, 0.0465)
##
## Outer iteration: 39
## Iteration: 1 (-137343.3829, 0.1579)
## Iteration: 10 (-137343.2486, 0.0075)
## Iteration: 20 (-137343.1733, 0.0072)
## Iteration: 30 (-137343.1131, 0.0070)
## Iteration: 40 (-137343.0600, 0.0069)
## Iteration: 50 (-137343.0109, 0.0068)
## Group probs = (0.8175, 0.1356, 0.0469)
##
## Outer iteration: 40
## Iteration: 1 (-137211.6144, 0.0091)
## Iteration: 10 (-137211.5632, 0.0068)
## Iteration: 20 (-137211.5155, 0.0067)
## Iteration: 30 (-137211.4707, 0.0067)
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## Iteration: 40 (-137211.4278, 0.0066)
## Iteration: 50 (-137211.3863, 0.0066)
## Group probs = (0.8189, 0.1348, 0.0462)
##
## CCEs_2018
## Outer iteration: 1
## Iteration: 1 (-562370.0901, Inf)
## Iteration: 10 (-516016.5895, 4.6101)
## Iteration: 20 (-512445.7679, 2.0889)
## Iteration: 30 (-511090.4536, 1.3536)
## Iteration: 40 (-510338.9445, 1.0046)
## Iteration: 50 (-509848.1099, 0.8006)
## Group probs = (0.8160, 0.1431, 0.0410)
##
## Outer iteration: 2
## Iteration: 1 (-514552.4125, 1.3154)
## Iteration: 10 (-514288.7658, 0.6347)
## Iteration: 20 (-514076.3453, 0.5406)
## Iteration: 30 (-513910.5811, 0.4711)
## Iteration: 40 (-513776.8245, 0.4177)
## Iteration: 50 (-513666.2290, 0.3752)
## Group probs = (0.8177, 0.1427, 0.0396)
##
## Outer iteration: 3
## Iteration: 1 (-515451.0856, 0.3723)
## Iteration: 10 (-515365.9152, 0.3411)
## Iteration: 20 (-515284.9178, 0.3131)
## Iteration: 30 (-515214.7812, 0.2890)
## Iteration: 40 (-515153.3744, 0.2682)
## Iteration: 50 (-515099.1110, 0.2502)
## Group probs = (0.8187, 0.1422, 0.0391)
##
## Outer iteration: 4
## Iteration: 1 (-516046.1924, 0.4029)
## Iteration: 10 (-516002.1882, 0.2347)
## Iteration: 20 (-515958.2771, 0.2209)
## Iteration: 30 (-515918.6904, 0.2086)
## Iteration: 40 (-515882.7896, 0.1975)
## Iteration: 50 (-515850.0681, 0.1876)
## Group probs = (0.8221, 0.1401, 0.0378)
##
## Outer iteration: 5
## Iteration: 1 (-519287.2886, 0.2926)
## Iteration: 10 (-519259.5574, 0.1790)
## Iteration: 20 (-519231.2882, 0.1711)
## Iteration: 30 (-519205.2278, 0.1637)
## Iteration: 40 (-519181.1160, 0.1569)
## Iteration: 50 (-519158.7368, 0.1506)
## Group probs = (0.8222, 0.1399, 0.0378)
##
## Outer iteration: 6
## Iteration: 1 (-519140.2027, 0.1687)
## Iteration: 10 (-519121.0084, 0.1453)
## Iteration: 20 (-519101.1264, 0.1398)

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## Iteration: 30 (-519082.5431, 0.1348)
## Iteration: 40 (-519065.1278, 0.1301)
## Iteration: 50 (-519048.7708, 0.1257)
## Group probs = (0.8220, 0.1400, 0.0380)
##
## Outer iteration: 7
## Iteration: 1 (-518789.2325, 0.1260)
## Iteration: 10 (-518775.0474, 0.1222)
## Iteration: 20 (-518760.2098, 0.1181)
## Iteration: 30 (-518746.2058, 0.1145)
## Iteration: 40 (-518732.9630, 0.1110)
## Iteration: 50 (-518720.4195, 0.1078)
## Group probs = (0.8208, 0.1407, 0.0384)
##
## Outer iteration: 8
## Iteration: 1 (-517584.4476, 0.1079)
## Iteration: 10 (-517573.4688, 0.1055)
## Iteration: 20 (-517561.9611, 0.1022)
## Iteration: 30 (-517551.0288, 0.0994)
## Iteration: 40 (-517540.6219, 0.0968)
## Iteration: 50 (-517530.7013, 0.0943)
## Group probs = (0.8216, 0.1403, 0.0382)
##
## Outer iteration: 9
## Iteration: 1 (-518256.9693, 0.1264)
## Iteration: 10 (-518248.2357, 0.0923)
## Iteration: 20 (-518238.9966, 0.0900)
## Iteration: 30 (-518230.1678, 0.0879)
## Iteration: 40 (-518221.7180, 0.0858)
## Iteration: 50 (-518213.6219, 0.0839)
## Group probs = (0.8225, 0.1397, 0.0379)
##
## Outer iteration: 10
## Iteration: 1 (-519098.3127, 0.0862)
## Iteration: 10 (-519091.1249, 0.0823)
## Iteration: 20 (-519083.4728, 0.0806)
## Iteration: 30 (-519076.1251, 0.0789)
## Iteration: 40 (-519069.0628, 0.0773)
## Iteration: 50 (-519062.2689, 0.0757)
## Group probs = (0.8231, 0.1393, 0.0377)
##
## Outer iteration: 11
## Iteration: 1 (-519691.6527, 0.0760)
## Iteration: 10 (-519685.6222, 0.0745)
## Iteration: 20 (-519679.1823, 0.0730)
## Iteration: 30 (-519672.9769, 0.0716)
## Iteration: 40 (-519666.9918, 0.0702)
## Iteration: 50 (-519661.2150, 0.0689)
## Group probs = (0.8241, 0.1385, 0.0374)
##
## Outer iteration: 12
## Iteration: 1 (-520608.6731, 0.1240)
## Iteration: 10 (-520603.2365, 0.0681)
## Iteration: 20 (-520597.5294, 0.0671)
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## Iteration: 30 (-520592.0354, 0.0659)
## Iteration: 40 (-520586.7294, 0.0648)
## Iteration: 50 (-520581.5979, 0.0637)
## Group probs = (0.8247, 0.1382, 0.0371)
##
## Outer iteration: 13
## Iteration: 1 (-521191.4671, 0.1175)
## Iteration: 10 (-521186.7009, 0.0632)
## Iteration: 20 (-521181.6785, 0.0622)
## Iteration: 30 (-521176.8378, 0.0612)
## Iteration: 40 (-521172.1545, 0.0602)
## Iteration: 50 (-521167.6160, 0.0592)
## Group probs = (0.8255, 0.1375, 0.0370)
##
## Outer iteration: 14
## Iteration: 1 (-521896.5559, 0.0598)
## Iteration: 10 (-521892.4231, 0.0585)
## Iteration: 20 (-521888.0173, 0.0577)
## Iteration: 30 (-521883.7496, 0.0568)
## Iteration: 40 (-521879.6074, 0.0560)
## Iteration: 50 (-521875.5829, 0.0551)
## Group probs = (0.8251, 0.1376, 0.0373)
##
## Outer iteration: 15
## Iteration: 1 (-521432.0179, 0.0637)
## Iteration: 10 (-521428.3986, 0.0548)
## Iteration: 20 (-521424.5030, 0.0538)
## Iteration: 30 (-521420.7156, 0.0530)
## Iteration: 40 (-521417.0300, 0.0522)
## Iteration: 50 (-521413.4418, 0.0515)
## Group probs = (0.8249, 0.1375, 0.0376)
##
## Outer iteration: 16
## Iteration: 1 (-521183.8195, 0.1429)
## Iteration: 10 (-521180.5563, 0.0509)
## Iteration: 20 (-521177.1270, 0.0500)
## Iteration: 30 (-521173.8009, 0.0493)
## Iteration: 40 (-521170.5637, 0.0486)
## Iteration: 50 (-521167.4087, 0.0480)
## Group probs = (0.8248, 0.1374, 0.0378)
##
## Outer iteration: 17
## Iteration: 1 (-521030.2709, 0.0684)
## Iteration: 10 (-521027.3947, 0.0476)
## Iteration: 20 (-521024.3288, 0.0468)
## Iteration: 30 (-521021.3477, 0.0462)
## Iteration: 40 (-521018.4413, 0.0456)
## Iteration: 50 (-521015.6044, 0.0450)
## Group probs = (0.8228, 0.1387, 0.0385)
##
## Outer iteration: 18
## Iteration: 1 (-519069.2988, 0.2626)
## Iteration: 10 (-519066.5951, 0.0453)
## Iteration: 20 (-519063.7383, 0.0446)

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## Iteration: 30 (-519060.9584, 0.0440)
## Iteration: 40 (-519058.2455, 0.0434)
## Iteration: 50 (-519055.5949, 0.0429)
## Group probs = (0.8227, 0.1390, 0.0383)
##
## Outer iteration: 19
## Iteration: 1 (-519024.3131, 0.1178)
## Iteration: 10 (-519021.8084, 0.0429)
## Iteration: 20 (-519019.1629, 0.0424)
## Iteration: 30 (-519016.5876, 0.0419)
## Iteration: 40 (-519014.0727, 0.0414)
## Iteration: 50 (-519011.6135, 0.0409)
## Group probs = (0.8223, 0.1391, 0.0386)
##
## Outer iteration: 20
## Iteration: 1 (-518551.9572, 0.0588)
## Iteration: 10 (-518549.7434, 0.0406)
## Iteration: 20 (-518547.3684, 0.0400)
## Iteration: 30 (-518545.0447, 0.0396)
## Iteration: 40 (-518542.7686, 0.0391)
## Iteration: 50 (-518540.5383, 0.0387)
## Group probs = (0.8235, 0.1384, 0.0381)
##
## Outer iteration: 21
## Iteration: 1 (-519777.4470, 0.0493)
## Iteration: 10 (-519775.4078, 0.0384)
## Iteration: 20 (-519773.2091, 0.0381)
## Iteration: 30 (-519771.0566, 0.0377)
## Iteration: 40 (-519768.9467, 0.0373)
## Iteration: 50 (-519766.8774, 0.0370)
## Group probs = (0.8243, 0.1377, 0.0380)
##
## Outer iteration: 22
## Iteration: 1 (-520594.8068, 0.1260)
## Iteration: 10 (-520592.9316, 0.0365)
## Iteration: 20 (-520590.9217, 0.0362)
## Iteration: 30 (-520588.9526, 0.0358)
## Iteration: 40 (-520587.0209, 0.0355)
## Iteration: 50 (-520585.1248, 0.0352)
## Group probs = (0.8246, 0.1374, 0.0380)
##
## Outer iteration: 23
## Iteration: 1 (-520769.7708, 0.0358)
## Iteration: 10 (-520768.0471, 0.0350)
## Iteration: 20 (-520766.1723, 0.0346)
## Iteration: 30 (-520764.3311, 0.0343)
## Iteration: 40 (-520762.5224, 0.0340)
## Iteration: 50 (-520760.7451, 0.0337)
## Group probs = (0.8222, 0.1392, 0.0387)
##
## Outer iteration: 24
## Iteration: 1 (-518441.6842, 0.2296)
## Iteration: 10 (-518439.8584, 0.0344)
## Iteration: 20 (-518438.0625, 0.0337)

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## Iteration: 30 (-518436.3105, 0.0332)
## Iteration: 40 (-518434.5921, 0.0329)
## Iteration: 50 (-518432.9039, 0.0325)
## Group probs = (0.8212, 0.1398, 0.0390)
##
## Outer iteration: 25
## Iteration: 1 (-517544.9366, 0.0724)
## Iteration: 10 (-517543.3731, 0.0327)
## Iteration: 20 (-517541.7070, 0.0322)
## Iteration: 30 (-517540.0726, 0.0318)
## Iteration: 40 (-517538.4659, 0.0315)
## Iteration: 50 (-517536.8854, 0.0312)
## Group probs = (0.8192, 0.1411, 0.0396)
##
## Outer iteration: 26
## Iteration: 1 (-515587.3193, 0.1867)
## Iteration: 10 (-515585.7796, 0.0317)
## Iteration: 20 (-515584.1649, 0.0312)
## Iteration: 30 (-515582.5839, 0.0308)
## Iteration: 40 (-515581.0305, 0.0305)
## Iteration: 50 (-515579.5025, 0.0303)
## Group probs = (0.8199, 0.1408, 0.0393)
##
## Outer iteration: 27
## Iteration: 1 (-516227.6718, 0.0338)
## Iteration: 10 (-516226.2594, 0.0301)
## Iteration: 20 (-516224.7331, 0.0299)
## Iteration: 30 (-516223.2333, 0.0297)
## Iteration: 40 (-516221.7574, 0.0295)
## Iteration: 50 (-516220.3042, 0.0293)
## Group probs = (0.8213, 0.1398, 0.0389)
##
## Outer iteration: 28
## Iteration: 1 (-517553.2526, 0.1908)
## Iteration: 10 (-517551.9246, 0.0288)
## Iteration: 20 (-517550.5214, 0.0286)
## Iteration: 30 (-517549.1455, 0.0284)
## Iteration: 40 (-517547.7918, 0.0282)
## Iteration: 50 (-517546.4585, 0.0280)
## Group probs = (0.8207, 0.1403, 0.0390)
##
## Outer iteration: 29
## Iteration: 1 (-517039.3043, 0.1915)
## Iteration: 10 (-517037.9652, 0.0283)
## Iteration: 20 (-517036.5624, 0.0281)
## Iteration: 30 (-517035.1906, 0.0279)
## Iteration: 40 (-517033.8426, 0.0277)
## Iteration: 50 (-517032.5153, 0.0275)
## Group probs = (0.8208, 0.1403, 0.0389)
##
## Outer iteration: 30
## Iteration: 1 (-517093.1764, 0.0913)
## Iteration: 10 (-517091.8700, 0.0276)
## Iteration: 20 (-517090.4951, 0.0275)

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## Iteration: 30 (-517089.1544, 0.0273)
## Iteration: 40 (-517087.8384, 0.0271)
## Iteration: 50 (-517086.5431, 0.0269)
## Group probs = (0.8196, 0.1410, 0.0394)
##
## Outer iteration: 31
## Iteration: 1 (-515931.9975, 0.0329)
## Iteration: 10 (-515930.7934, 0.0271)
## Iteration: 20 (-515929.5225, 0.0266)
## Iteration: 30 (-515928.2743, 0.0264)
## Iteration: 40 (-515927.0439, 0.0261)
## Iteration: 50 (-515925.8299, 0.0259)
## Group probs = (0.8196, 0.1409, 0.0394)
##
## Outer iteration: 32
## Iteration: 1 (-515917.4042, 0.0263)
## Iteration: 10 (-515916.2877, 0.0259)
## Iteration: 20 (-515915.0730, 0.0257)
## Iteration: 30 (-515913.8746, 0.0255)
## Iteration: 40 (-515912.6916, 0.0253)
## Iteration: 50 (-515911.5233, 0.0252)
## Group probs = (0.8206, 0.1403, 0.0391)
##
## Outer iteration: 33
## Iteration: 1 (-516927.8437, 0.0804)
## Iteration: 10 (-516926.7896, 0.0250)
## Iteration: 20 (-516925.6485, 0.0248)
## Iteration: 30 (-516924.5228, 0.0247)
## Iteration: 40 (-516923.4110, 0.0245)
## Iteration: 50 (-516922.3126, 0.0243)
## Group probs = (0.8223, 0.1389, 0.0388)
##
## Outer iteration: 34
## Iteration: 1 (-518547.9213, 0.3711)
## Iteration: 10 (-518546.6101, 0.0239)
## Iteration: 20 (-518545.4798, 0.0236)
## Iteration: 30 (-518544.4245, 0.0234)
## Iteration: 40 (-518543.4074, 0.0232)
## Iteration: 50 (-518542.4141, 0.0230)
## Group probs = (0.8226, 0.1386, 0.0388)
##
## Outer iteration: 35
## Iteration: 1 (-518786.2889, 0.0509)
## Iteration: 10 (-518785.3030, 0.0229)
## Iteration: 20 (-518784.2909, 0.0227)
## Iteration: 30 (-518783.3040, 0.0226)
## Iteration: 40 (-518782.3346, 0.0225)
## Iteration: 50 (-518781.3792, 0.0224)
## Group probs = (0.8206, 0.1400, 0.0395)
##
## Outer iteration: 36
## Iteration: 1 (-516752.0530, 0.1755)
## Iteration: 10 (-516751.0721, 0.0230)
## Iteration: 20 (-516750.0888, 0.0225)
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## Iteration: 30 (-516749.1239, 0.0223)
## Iteration: 40 (-516748.1715, 0.0221)
## Iteration: 50 (-516747.2299, 0.0220)
## Group probs = (0.8198, 0.1406, 0.0397)
##
## Outer iteration: 37
## Iteration: 1 (-516024.2786, 0.0651)
## Iteration: 10 (-516023.3849, 0.0222)
## Iteration: 20 (-516022.4350, 0.0220)
## Iteration: 30 (-516021.4976, 0.0218)
## Iteration: 40 (-516020.5705, 0.0216)
## Iteration: 50 (-516019.6531, 0.0215)
## Group probs = (0.8213, 0.1396, 0.0391)
##
## Outer iteration: 38
## Iteration: 1 (-517466.1730, 0.0707)
## Iteration: 10 (-517465.2921, 0.0212)
## Iteration: 20 (-517464.3669, 0.0213)
## Iteration: 30 (-517463.4552, 0.0212)
## Iteration: 40 (-517462.5536, 0.0211)
## Iteration: 50 (-517461.6612, 0.0210)
## Group probs = (0.8213, 0.1395, 0.0392)
##
## Outer iteration: 39
## Iteration: 1 (-517521.2883, 0.0453)
## Iteration: 10 (-517520.4726, 0.0209)
## Iteration: 20 (-517519.5901, 0.0208)
## Iteration: 30 (-517518.7170, 0.0207)
## Iteration: 40 (-517517.8525, 0.0206)
## Iteration: 50 (-517516.9963, 0.0205)
## Group probs = (0.8194, 0.1409, 0.0397)
##
## Outer iteration: 40
## Iteration: 1 (-515562.1900, 0.3005)
## Iteration: 10 (-515561.1714, 0.0214)
## Iteration: 20 (-515560.1961, 0.0211)
## Iteration: 30 (-515559.2556, 0.0209)
## Iteration: 40 (-515558.3348, 0.0208)
## Iteration: 50 (-515557.4280, 0.0206)
## Group probs = (0.8189, 0.1412, 0.0399)
##
## Outer iteration: 1
## Iteration: 1 (-563164.1681, Inf)
## Iteration: 10 (-516888.0812, 4.5960)
## Iteration: 20 (-513333.9131, 2.0802)
## Iteration: 30 (-511986.7951, 1.3474)
## Iteration: 40 (-511240.4188, 0.9999)
## Iteration: 50 (-510753.1510, 0.7969)
## Group probs = (0.8188, 0.1418, 0.0394)
##
## Outer iteration: 2
## Iteration: 1 (-517479.6872, 1.4717)
## Iteration: 10 (-517218.4828, 0.6290)
## Iteration: 20 (-517010.3351, 0.5361)

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## Iteration: 30 (-516848.1440, 0.4672)
## Iteration: 40 (-516717.3889, 0.4142)
## Iteration: 50 (-516609.3541, 0.3721)
## Group probs = (0.8213, 0.1409, 0.0378)
##
## Outer iteration: 3
## Iteration: 1 (-519126.6718, 0.4901)
## Iteration: 10 (-519043.9803, 0.3374)
## Iteration: 20 (-518965.4851, 0.3098)
## Iteration: 30 (-518897.5801, 0.2860)
## Iteration: 40 (-518838.1682, 0.2655)
## Iteration: 50 (-518785.7007, 0.2476)
## Group probs = (0.8227, 0.1403, 0.0371)
##
## Outer iteration: 4
## Iteration: 1 (-520149.8127, 0.4046)
## Iteration: 10 (-520107.2308, 0.2323)
## Iteration: 20 (-520064.8551, 0.2187)
## Iteration: 30 (-520026.6904, 0.2065)
## Iteration: 40 (-519992.1010, 0.1955)
## Iteration: 50 (-519960.5912, 0.1857)
## Group probs = (0.8247, 0.1391, 0.0362)
##
## Outer iteration: 5
## Iteration: 1 (-522034.6146, 0.2648)
## Iteration: 10 (-522008.1179, 0.1772)
## Iteration: 20 (-521981.0857, 0.1692)
## Iteration: 30 (-521956.1806, 0.1619)
## Iteration: 40 (-521933.1503, 0.1551)
## Iteration: 50 (-521911.7861, 0.1488)
## Group probs = (0.8264, 0.1380, 0.0357)
##
## Outer iteration: 6
## Iteration: 1 (-523360.0523, 0.2529)
## Iteration: 10 (-523341.5905, 0.1432)
## Iteration: 20 (-523322.6110, 0.1381)
## Iteration: 30 (-523304.8927, 0.1331)
## Iteration: 40 (-523288.3020, 0.1285)
## Iteration: 50 (-523272.7304, 0.1242)
## Group probs = (0.8257, 0.1385, 0.0358)
##
## Outer iteration: 7
## Iteration: 1 (-522684.3088, 0.1399)
## Iteration: 10 (-522670.8284, 0.1209)
## Iteration: 20 (-522656.7470, 0.1169)
## Iteration: 30 (-522643.4609, 0.1132)
## Iteration: 40 (-522630.9016, 0.1098)
## Iteration: 50 (-522619.0104, 0.1066)
## Group probs = (0.8270, 0.1377, 0.0353)
##
## Outer iteration: 8
## Iteration: 1 (-523939.3458, 0.1290)
## Iteration: 10 (-523928.9818, 0.1040)
## Iteration: 20 (-523918.0654, 0.1012)
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## Iteration: 30 (-523907.6896, 0.0984)
## Iteration: 40 (-523897.8140, 0.0959)
## Iteration: 50 (-523888.4029, 0.0934)
## Group probs = (0.8282, 0.1368, 0.0350)
##
## Outer iteration: 9
## Iteration: 1 (-525013.4078, 0.1421)
## Iteration: 10 (-525005.1184, 0.0913)
## Iteration: 20 (-524996.3692, 0.0891)
## Iteration: 30 (-524988.0097, 0.0870)
## Iteration: 40 (-524980.0124, 0.0850)
## Iteration: 50 (-524972.3536, 0.0831)
## Group probs = (0.8285, 0.1364, 0.0351)
##
## Outer iteration: 10
## Iteration: 1 (-525242.5980, 0.1338)
## Iteration: 10 (-525235.8319, 0.0815)
## Iteration: 20 (-525228.6952, 0.0795)
## Iteration: 30 (-525221.8520, 0.0778)
## Iteration: 40 (-525215.2800, 0.0762)
## Iteration: 50 (-525208.9617, 0.0746)
## Group probs = (0.8271, 0.1372, 0.0357)
##
## Outer iteration: 11
## Iteration: 1 (-523833.2860, 0.1135)
## Iteration: 10 (-523827.6338, 0.0737)
## Iteration: 20 (-523821.6554, 0.0719)
## Iteration: 30 (-523815.9031, 0.0705)
## Iteration: 40 (-523810.3594, 0.0691)
## Iteration: 50 (-523805.0120, 0.0678)
## Group probs = (0.8280, 0.1366, 0.0353)
##
## Outer iteration: 12
## Iteration: 1 (-524715.7732, 0.0820)
## Iteration: 10 (-524711.0268, 0.0668)
## Iteration: 20 (-524705.9547, 0.0656)
## Iteration: 30 (-524701.0544, 0.0644)
## Iteration: 40 (-524696.3164, 0.0632)
## Iteration: 50 (-524691.7326, 0.0621)
## Group probs = (0.8279, 0.1365, 0.0356)
##
## Outer iteration: 13
## Iteration: 1 (-524421.7032, 0.0738)
## Iteration: 10 (-524417.5948, 0.0612)
## Iteration: 20 (-524413.2322, 0.0601)
## Iteration: 30 (-524409.0107, 0.0591)
## Iteration: 40 (-524404.9209, 0.0581)
## Iteration: 50 (-524400.9559, 0.0572)
## Group probs = (0.8300, 0.1351, 0.0349)
##
## Outer iteration: 14
## Iteration: 1 (-526509.9989, 0.0793)
## Iteration: 10 (-526506.3405, 0.0563)
## Iteration: 20 (-526502.4787, 0.0557)

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## Iteration: 30 (-526498.7388, 0.0549)
## Iteration: 40 (-526495.1092, 0.0541)
## Iteration: 50 (-526491.5838, 0.0533)
## Group probs = (0.8282, 0.1361, 0.0356)
##
## Outer iteration: 15
## Iteration: 1 (-524684.4467, 0.0648)
## Iteration: 10 (-524681.2425, 0.0530)
## Iteration: 20 (-524677.8844, 0.0519)
## Iteration: 30 (-524674.6296, 0.0510)
## Iteration: 40 (-524671.4655, 0.0503)
## Iteration: 50 (-524668.3867, 0.0495)
## Group probs = (0.8272, 0.1367, 0.0360)
##
## Outer iteration: 16
## Iteration: 1 (-523713.5937, 0.1010)
## Iteration: 10 (-523710.8105, 0.0493)
## Iteration: 20 (-523707.8238, 0.0484)
## Iteration: 30 (-523704.9175, 0.0477)
## Iteration: 40 (-523702.0864, 0.0471)
## Iteration: 50 (-523699.3271, 0.0464)
## Group probs = (0.8254, 0.1381, 0.0366)
##
## Outer iteration: 17
## Iteration: 1 (-521936.8813, 0.2522)
## Iteration: 10 (-521934.2105, 0.0467)
## Iteration: 20 (-521931.4561, 0.0458)
## Iteration: 30 (-521928.7841, 0.0451)
## Iteration: 40 (-521926.1827, 0.0445)
## Iteration: 50 (-521923.6464, 0.0439)
## Group probs = (0.8276, 0.1366, 0.0358)
##
## Outer iteration: 18
## Iteration: 1 (-524043.8959, 0.2027)
## Iteration: 10 (-524041.6083, 0.0431)
## Iteration: 20 (-524039.1847, 0.0428)
## Iteration: 30 (-524036.8200, 0.0423)
## Iteration: 40 (-524034.5101, 0.0418)
## Iteration: 50 (-524032.2526, 0.0414)
## Group probs = (0.8271, 0.1370, 0.0359)
##
## Outer iteration: 19
## Iteration: 1 (-523614.9642, 0.1103)
## Iteration: 10 (-523612.8878, 0.0413)
## Iteration: 20 (-523610.6693, 0.0407)
## Iteration: 30 (-523608.5030, 0.0402)
## Iteration: 40 (-523606.3852, 0.0398)
## Iteration: 50 (-523604.3135, 0.0393)
## Group probs = (0.8258, 0.1378, 0.0364)
##
## Outer iteration: 20
## Iteration: 1 (-522210.1709, 0.0901)
## Iteration: 10 (-522208.2733, 0.0392)
## Iteration: 20 (-522206.2399, 0.0386)
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## Iteration: 30 (-522204.2534, 0.0381)
## Iteration: 40 (-522202.3095, 0.0377)
## Iteration: 50 (-522200.4064, 0.0373)
## Group probs = (0.8248, 0.1385, 0.0367)
##
## Outer iteration: 21
## Iteration: 1 (-521301.4890, 0.0605)
## Iteration: 10 (-521299.7461, 0.0373)
## Iteration: 20 (-521297.9050, 0.0367)
## Iteration: 30 (-521296.1056, 0.0362)
## Iteration: 40 (-521294.3430, 0.0358)
## Iteration: 50 (-521292.6155, 0.0354)
## Group probs = (0.8243, 0.1387, 0.0369)
##
## Outer iteration: 22
## Iteration: 1 (-520869.5937, 0.0355)
## Iteration: 10 (-520868.0343, 0.0352)
## Iteration: 20 (-520866.3512, 0.0348)
## Iteration: 30 (-520864.7029, 0.0344)
## Iteration: 40 (-520863.0868, 0.0340)
## Iteration: 50 (-520861.5013, 0.0337)
## Group probs = (0.8253, 0.1381, 0.0366)
##
## Outer iteration: 23
## Iteration: 1 (-521835.4052, 0.1676)
## Iteration: 10 (-521833.9582, 0.0332)
## Iteration: 20 (-521832.4340, 0.0329)
## Iteration: 30 (-521830.9456, 0.0326)
## Iteration: 40 (-521829.4873, 0.0323)
## Iteration: 50 (-521828.0564, 0.0320)
## Group probs = (0.8256, 0.1379, 0.0366)
##
## Outer iteration: 24
## Iteration: 1 (-522020.6834, 0.0569)
## Iteration: 10 (-522019.3667, 0.0318)
## Iteration: 20 (-522017.9556, 0.0315)
## Iteration: 30 (-522016.5754, 0.0312)
## Iteration: 40 (-522015.2218, 0.0309)
## Iteration: 50 (-522013.8926, 0.0306)
## Group probs = (0.8252, 0.1382, 0.0366)
##
## Outer iteration: 25
## Iteration: 1 (-521642.0111, 0.1736)
## Iteration: 10 (-521640.6951, 0.0307)
## Iteration: 20 (-521639.3261, 0.0305)
## Iteration: 30 (-521637.9937, 0.0302)
## Iteration: 40 (-521636.6893, 0.0299)
## Iteration: 50 (-521635.4091, 0.0297)
## Group probs = (0.8257, 0.1378, 0.0365)
##
## Outer iteration: 26
## Iteration: 1 (-522113.2457, 0.0382)
## Iteration: 10 (-522112.0438, 0.0294)
## Iteration: 20 (-522110.7765, 0.0292)
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## Iteration: 30 (-522109.5338, 0.0290)
## Iteration: 40 (-522108.3126, 0.0288)
## Iteration: 50 (-522107.1117, 0.0285)
## Group probs = (0.8226, 0.1400, 0.0375)
##
## Outer iteration: 27
## Iteration: 1 (-519146.5443, 0.2032)
## Iteration: 10 (-519145.1599, 0.0292)
## Iteration: 20 (-519143.9641, 0.0284)
## Iteration: 30 (-519142.8075, 0.0280)
## Iteration: 40 (-519141.6740, 0.0277)
## Iteration: 50 (-519140.5600, 0.0275)
## Group probs = (0.8242, 0.1389, 0.0369)
##
## Outer iteration: 28
## Iteration: 1 (-520663.0058, 0.0426)
## Iteration: 10 (-520661.9070, 0.0272)
## Iteration: 20 (-520660.7711, 0.0271)
## Iteration: 30 (-520659.6607, 0.0270)
## Iteration: 40 (-520658.5702, 0.0268)
## Iteration: 50 (-520657.4974, 0.0266)
## Group probs = (0.8223, 0.1402, 0.0375)
##
## Outer iteration: 29
## Iteration: 1 (-518806.2698, 0.1970)
## Iteration: 10 (-518805.1846, 0.0270)
## Iteration: 20 (-518804.0810, 0.0266)
## Iteration: 30 (-518803.0058, 0.0263)
## Iteration: 40 (-518801.9517, 0.0261)
## Iteration: 50 (-518800.9157, 0.0259)
## Group probs = (0.8230, 0.1398, 0.0372)
##
## Outer iteration: 30
## Iteration: 1 (-519580.6642, 0.0396)
## Iteration: 10 (-519579.7148, 0.0257)
## Iteration: 20 (-519578.6938, 0.0256)
## Iteration: 30 (-519577.6923, 0.0254)
## Iteration: 40 (-519576.7074, 0.0252)
## Iteration: 50 (-519575.7376, 0.0250)
## Group probs = (0.8265, 0.1375, 0.0360)
##
## Outer iteration: 31
## Iteration: 1 (-522888.1599, 0.1930)
## Iteration: 10 (-522887.0319, 0.0245)
## Iteration: 20 (-522886.0383, 0.0246)
## Iteration: 30 (-522885.0761, 0.0246)
## Iteration: 40 (-522884.1319, 0.0244)
## Iteration: 50 (-522883.2024, 0.0243)
## Group probs = (0.8294, 0.1354, 0.0352)
##
## Outer iteration: 32
## Iteration: 1 (-525708.0314, 0.1928)
## Iteration: 10 (-525706.9616, 0.0237)
## Iteration: 20 (-525706.0258, 0.0238)

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## Iteration: 30 (-525705.1194, 0.0238)
## Iteration: 40 (-525704.2299, 0.0237)
## Iteration: 50 (-525703.3542, 0.0235)
## Group probs = (0.8269, 0.1371, 0.0360)
##
## Outer iteration: 33
## Iteration: 1 (-523220.7845, 0.3435)
## Iteration: 10 (-523219.6398, 0.0245)
## Iteration: 20 (-523218.6585, 0.0239)
## Iteration: 30 (-523217.7305, 0.0236)
## Iteration: 40 (-523216.8309, 0.0234)
## Iteration: 50 (-523215.9509, 0.0232)
## Group probs = (0.8290, 0.1353, 0.0356)
##
## Outer iteration: 34
## Iteration: 1 (-525341.0111, 0.3209)
## Iteration: 10 (-525340.0827, 0.0226)
## Iteration: 20 (-525339.2455, 0.0225)
## Iteration: 30 (-525338.4337, 0.0224)
## Iteration: 40 (-525337.6379, 0.0222)
## Iteration: 50 (-525336.8549, 0.0221)
## Group probs = (0.8275, 0.1363, 0.0362)
##
## Outer iteration: 35
## Iteration: 1 (-523686.4020, 0.2190)
## Iteration: 10 (-523685.5875, 0.0226)
## Iteration: 20 (-523684.7523, 0.0223)
## Iteration: 30 (-523683.9378, 0.0221)
## Iteration: 40 (-523683.1375, 0.0219)
## Iteration: 50 (-523682.3493, 0.0218)
## Group probs = (0.8291, 0.1351, 0.0358)
##
## Outer iteration: 36
## Iteration: 1 (-525282.3359, 0.1634)
## Iteration: 10 (-525281.5886, 0.0214)
## Iteration: 20 (-525280.8223, 0.0213)
## Iteration: 30 (-525280.0690, 0.0213)
## Iteration: 40 (-525279.3262, 0.0211)
## Iteration: 50 (-525278.5930, 0.0210)
## Group probs = (0.8269, 0.1366, 0.0365)
##
## Outer iteration: 37
## Iteration: 1 (-523184.9285, 0.1834)
## Iteration: 10 (-523184.1463, 0.0216)
## Iteration: 20 (-523183.3975, 0.0211)
## Iteration: 30 (-523182.6652, 0.0209)
## Iteration: 40 (-523181.9437, 0.0207)
## Iteration: 50 (-523181.2316, 0.0206)
## Group probs = (0.8270, 0.1364, 0.0367)
##
## Outer iteration: 38
## Iteration: 1 (-523247.0345, 0.2070)
## Iteration: 10 (-523246.2390, 0.0204)
## Iteration: 20 (-523245.5281, 0.0201)
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## Iteration: 30 (-523244.8573, 0.0199)
## Iteration: 40 (-523244.2070, 0.0197)
## Iteration: 50 (-523243.5697, 0.0196)
## Group probs = (0.8279, 0.1359, 0.0362)
##
## Outer iteration: 39
## Iteration: 1 (-524120.9830, 0.0944)
## Iteration: 10 (-524120.2980, 0.0196)
## Iteration: 20 (-524119.6103, 0.0196)
## Iteration: 30 (-524118.9401, 0.0196)
## Iteration: 40 (-524118.2809, 0.0195)
## Iteration: 50 (-524117.6304, 0.0194)
## Group probs = (0.8278, 0.1359, 0.0364)
##
## Outer iteration: 40
## Iteration: 1 (-523953.6740, 0.0852)
## Iteration: 10 (-523953.0832, 0.0193)
## Iteration: 20 (-523952.4606, 0.0191)
## Iteration: 30 (-523951.8484, 0.0190)
## Iteration: 40 (-523951.2443, 0.0188)
## Iteration: 50 (-523950.6472, 0.0187)
## Group probs = (0.8243, 0.1380, 0.0376)
##
## Outer iteration: 1
## Iteration: 1 (-563951.1347,   Inf)
## Iteration: 10 (-517635.2795, 4.6039)
## Iteration: 20 (-514076.1505, 2.0849)
## Iteration: 30 (-512725.3864, 1.3513)
## Iteration: 40 (-511976.1087, 1.0033)
## Iteration: 50 (-511486.4528, 0.8000)
## Group probs = (0.8184, 0.1418, 0.0398)
##
## Outer iteration: 2
## Iteration: 1 (-517243.7028, 1.4119)
## Iteration: 10 (-516981.1793, 0.6321)
## Iteration: 20 (-516772.2464, 0.5386)
## Iteration: 30 (-516609.4043, 0.4694)
## Iteration: 40 (-516478.0662, 0.4162)
## Iteration: 50 (-516369.4911, 0.3740)
## Group probs = (0.8219, 0.1401, 0.0380)
##
## Outer iteration: 3
## Iteration: 1 (-519799.6515, 0.6297)
## Iteration: 10 (-519716.6647, 0.3390)
## Iteration: 20 (-519637.8647, 0.3113)
## Iteration: 30 (-519569.6740, 0.2874)
## Iteration: 40 (-519509.9855, 0.2668)
## Iteration: 50 (-519457.2496, 0.2489)
## Group probs = (0.8260, 0.1375, 0.0364)
##
## Outer iteration: 4
## Iteration: 1 (-523354.8565, 0.4503)
## Iteration: 10 (-523311.4115, 0.2331)
## Iteration: 20 (-523268.3758, 0.2201)

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## Iteration: 30 (-523229.5994, 0.2080)
## Iteration: 40 (-523194.4453, 0.1971)
## Iteration: 50 (-523162.4137, 0.1872)
## Group probs = (0.8271, 0.1369, 0.0359)
##
## Outer iteration: 5
## Iteration: 1 (-524326.4877, 0.2620)
## Iteration: 10 (-524299.6510, 0.1788)
## Iteration: 20 (-524272.2699, 0.1706)
## Iteration: 30 (-524247.0432, 0.1632)
## Iteration: 40 (-524223.7104, 0.1563)
## Iteration: 50 (-524202.0596, 0.1500)
## Group probs = (0.8286, 0.1360, 0.0355)
##
## Outer iteration: 6
## Iteration: 1 (-525584.4270, 0.2078)
## Iteration: 10 (-525565.8710, 0.1446)
## Iteration: 20 (-525546.6741, 0.1393)
## Iteration: 30 (-525528.7353, 0.1343)
## Iteration: 40 (-525511.9276, 0.1296)
## Iteration: 50 (-525496.1443, 0.1252)
## Group probs = (0.8273, 0.1367, 0.0360)
##
## Outer iteration: 7
## Iteration: 1 (-524204.7327, 0.1267)
## Iteration: 10 (-524191.0581, 0.1217)
## Iteration: 20 (-524176.8540, 0.1176)
## Iteration: 30 (-524163.4630, 0.1139)
## Iteration: 40 (-524150.8055, 0.1104)
## Iteration: 50 (-524138.8195, 0.1072)
## Group probs = (0.8262, 0.1374, 0.0364)
##
## Outer iteration: 8
## Iteration: 1 (-523076.8432, 0.1443)
## Iteration: 10 (-523066.2414, 0.1048)
## Iteration: 20 (-523055.3308, 0.1014)
## Iteration: 30 (-523044.9988, 0.0986)
## Iteration: 40 (-523035.1747, 0.0960)
## Iteration: 50 (-523025.8144, 0.0935)
## Group probs = (0.8289, 0.1356, 0.0355)
##
## Outer iteration: 9
## Iteration: 1 (-525594.5089, 0.1340)
## Iteration: 10 (-525586.0921, 0.0913)
## Iteration: 20 (-525577.2736, 0.0894)
## Iteration: 30 (-525568.8503, 0.0873)
## Iteration: 40 (-525560.7913, 0.0853)
## Iteration: 50 (-525553.0722, 0.0834)
## Group probs = (0.8296, 0.1349, 0.0354)
##
## Outer iteration: 10
## Iteration: 1 (-526305.5256, 0.2158)
## Iteration: 10 (-526298.7087, 0.0816)
## Iteration: 20 (-526291.5636, 0.0797)

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## Iteration: 30 (-526284.7159, 0.0780)
## Iteration: 40 (-526278.1398, 0.0764)
## Iteration: 50 (-526271.8169, 0.0748)
## Group probs = (0.8301, 0.1346, 0.0353)
##
## Outer iteration: 11
## Iteration: 1 (-526722.1865, 0.0747)
## Iteration: 10 (-526716.5423, 0.0737)
## Iteration: 20 (-526710.5444, 0.0722)
## Iteration: 30 (-526704.7681, 0.0708)
## Iteration: 40 (-526699.1986, 0.0694)
## Iteration: 50 (-526693.8242, 0.0681)
## Group probs = (0.8287, 0.1355, 0.0358)
##
## Outer iteration: 12
## Iteration: 1 (-525208.2077, 0.2467)
## Iteration: 10 (-525203.2646, 0.0675)
## Iteration: 20 (-525198.0413, 0.0661)
## Iteration: 30 (-525193.0120, 0.0649)
## Iteration: 40 (-525188.1559, 0.0638)
## Iteration: 50 (-525183.4607, 0.0626)
## Group probs = (0.8301, 0.1344, 0.0355)
##
## Outer iteration: 13
## Iteration: 1 (-526571.9451, 0.1929)
## Iteration: 10 (-526567.7581, 0.0615)
## Iteration: 20 (-526563.3220, 0.0605)
## Iteration: 30 (-526559.0276, 0.0595)
## Iteration: 40 (-526554.8660, 0.0586)
## Iteration: 50 (-526550.8305, 0.0577)
## Group probs = (0.8321, 0.1329, 0.0349)
##
## Outer iteration: 14
## Iteration: 1 (-528512.9857, 0.1238)
## Iteration: 10 (-528509.2930, 0.0567)
## Iteration: 20 (-528505.3908, 0.0560)
## Iteration: 30 (-528501.6061, 0.0552)
## Iteration: 40 (-528497.9309, 0.0544)
## Iteration: 50 (-528494.3600, 0.0536)
## Group probs = (0.8272, 0.1362, 0.0366)
##
## Outer iteration: 15
## Iteration: 1 (-523649.0736, 0.5016)
## Iteration: 10 (-523645.2461, 0.0544)
## Iteration: 20 (-523641.6564, 0.0529)
## Iteration: 30 (-523638.2088, 0.0519)
## Iteration: 40 (-523634.8691, 0.0511)
## Iteration: 50 (-523631.6253, 0.0504)
## Group probs = (0.8254, 0.1375, 0.0371)
##
## Outer iteration: 16
## Iteration: 1 (-521891.7262, 0.0955)
## Iteration: 10 (-521888.7384, 0.0503)
## Iteration: 20 (-521885.6387, 0.0492)
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## Iteration: 30 (-521882.6306, 0.0484)
## Iteration: 40 (-521879.7021, 0.0477)
## Iteration: 50 (-521876.8485, 0.0470)
## Group probs = (0.8279, 0.1359, 0.0362)
##
## Outer iteration: 17
## Iteration: 1 (-524348.8830, 0.1633)
## Iteration: 10 (-524346.2478, 0.0463)
## Iteration: 20 (-524343.4725, 0.0459)
## Iteration: 30 (-524340.7688, 0.0454)
## Iteration: 40 (-524338.1310, 0.0448)
## Iteration: 50 (-524335.5560, 0.0443)
## Group probs = (0.8279, 0.1360, 0.0362)
##
## Outer iteration: 18
## Iteration: 1 (-524342.4412, 0.0500)
## Iteration: 10 (-524340.1347, 0.0440)
## Iteration: 20 (-524337.6443, 0.0434)
## Iteration: 30 (-524335.2121, 0.0428)
## Iteration: 40 (-524332.8354, 0.0423)
## Iteration: 50 (-524330.5121, 0.0418)
## Group probs = (0.8297, 0.1345, 0.0358)
##
## Outer iteration: 19
## Iteration: 1 (-526029.5286, 0.2845)
## Iteration: 10 (-526027.2637, 0.0410)
## Iteration: 20 (-526025.0162, 0.0406)
## Iteration: 30 (-526022.8423, 0.0402)
## Iteration: 40 (-526020.7250, 0.0397)
## Iteration: 50 (-526018.6572, 0.0393)
## Group probs = (0.8287, 0.1351, 0.0362)
##
## Outer iteration: 20
## Iteration: 1 (-525018.8811, 0.2128)
## Iteration: 10 (-525016.9023, 0.0393)
## Iteration: 20 (-525014.7943, 0.0389)
## Iteration: 30 (-525012.7394, 0.0385)
## Iteration: 40 (-525010.7308, 0.0380)
## Iteration: 50 (-525008.7650, 0.0376)
## Group probs = (0.8296, 0.1345, 0.0359)
##
## Outer iteration: 21
## Iteration: 1 (-525917.1583, 0.0562)
## Iteration: 10 (-525915.3901, 0.0373)
## Iteration: 20 (-525913.4825, 0.0369)
## Iteration: 30 (-525911.6165, 0.0366)
## Iteration: 40 (-525909.7887, 0.0362)
## Iteration: 50 (-525907.9972, 0.0358)
## Group probs = (0.8261, 0.1368, 0.0371)
##
## Outer iteration: 22
## Iteration: 1 (-522442.6465, 0.2762)
## Iteration: 10 (-522440.7648, 0.0365)
## Iteration: 20 (-522438.9638, 0.0356)
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## Iteration: 30 (-522437.2163, 0.0351)
## Iteration: 40 (-522435.5074, 0.0346)
## Iteration: 50 (-522433.8330, 0.0343)
## Group probs = (0.8274, 0.1358, 0.0368)
##
## Outer iteration: 23
## Iteration: 1 (-523714.0559, 0.2836)
## Iteration: 10 (-523712.4255, 0.0337)
## Iteration: 20 (-523710.8260, 0.0333)
## Iteration: 30 (-523709.2782, 0.0329)
## Iteration: 40 (-523707.7673, 0.0326)
## Iteration: 50 (-523706.2872, 0.0323)
## Group probs = (0.8280, 0.1354, 0.0366)
##
## Outer iteration: 24
## Iteration: 1 (-524339.0384, 0.1248)
## Iteration: 10 (-524337.6162, 0.0321)
## Iteration: 20 (-524336.1465, 0.0317)
## Iteration: 30 (-524334.7249, 0.0314)
## Iteration: 40 (-524333.3369, 0.0311)
## Iteration: 50 (-524331.9766, 0.0308)
## Group probs = (0.8280, 0.1355, 0.0365)
##
## Outer iteration: 25
## Iteration: 1 (-524435.8962, 0.0818)
## Iteration: 10 (-524434.6313, 0.0308)
## Iteration: 20 (-524433.2786, 0.0305)
## Iteration: 30 (-524431.9508, 0.0302)
## Iteration: 40 (-524430.6457, 0.0300)
## Iteration: 50 (-524429.3622, 0.0297)
## Group probs = (0.8288, 0.1349, 0.0362)
##
## Outer iteration: 26
## Iteration: 1 (-525145.7312, 0.0389)
## Iteration: 10 (-525144.4937, 0.0295)
## Iteration: 20 (-525143.1891, 0.0294)
## Iteration: 30 (-525141.9137, 0.0292)
## Iteration: 40 (-525140.6617, 0.0290)
## Iteration: 50 (-525139.4308, 0.0287)
## Group probs = (0.8262, 0.1367, 0.0372)
##
## Outer iteration: 27
## Iteration: 1 (-522565.8750, 0.2453)
## Iteration: 10 (-522564.5934, 0.0293)
## Iteration: 20 (-522563.3338, 0.0287)
## Iteration: 30 (-522562.1101, 0.0283)
## Iteration: 40 (-522560.9111, 0.0280)
## Iteration: 50 (-522559.7333, 0.0278)
## Group probs = (0.8246, 0.1378, 0.0376)
##
## Outer iteration: 28
## Iteration: 1 (-521020.9324, 0.0731)
## Iteration: 10 (-521019.7854, 0.0281)
## Iteration: 20 (-521018.6303, 0.0275)
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## Iteration: 30 (-521017.5018, 0.0272)
## Iteration: 40 (-521016.3929, 0.0269)
## Iteration: 50 (-521015.3014, 0.0267)
## Group probs = (0.8276, 0.1357, 0.0367)
##
## Outer iteration: 29
## Iteration: 1 (-523907.0246, 0.2675)
## Iteration: 10 (-523905.8188, 0.0261)
## Iteration: 20 (-523904.7342, 0.0261)
## Iteration: 30 (-523903.6800, 0.0260)
## Iteration: 40 (-523902.6456, 0.0258)
## Iteration: 50 (-523901.6280, 0.0257)
## Group probs = (0.8280, 0.1354, 0.0366)
##
## Outer iteration: 30
## Iteration: 1 (-524277.5624, 0.0259)
## Iteration: 10 (-524276.6376, 0.0255)
## Iteration: 20 (-524275.6319, 0.0254)
## Iteration: 30 (-524274.6414, 0.0252)
## Iteration: 40 (-524273.6649, 0.0250)
## Iteration: 50 (-524272.7021, 0.0249)
## Group probs = (0.8289, 0.1348, 0.0363)
##
## Outer iteration: 31
## Iteration: 1 (-525204.2184, 0.1328)
## Iteration: 10 (-525203.3277, 0.0246)
## Iteration: 20 (-525202.3909, 0.0244)
## Iteration: 30 (-525201.4732, 0.0242)
## Iteration: 40 (-525200.5705, 0.0241)
## Iteration: 50 (-525199.6809, 0.0239)
## Group probs = (0.8275, 0.1357, 0.0369)
##
## Outer iteration: 32
## Iteration: 1 (-523762.7206, 0.1677)
## Iteration: 10 (-523761.8531, 0.0242)
## Iteration: 20 (-523760.9360, 0.0239)
## Iteration: 30 (-523760.0361, 0.0237)
## Iteration: 40 (-523759.1500, 0.0235)
## Iteration: 50 (-523758.2762, 0.0233)
## Group probs = (0.8266, 0.1363, 0.0371)
##
## Outer iteration: 33
## Iteration: 1 (-522869.5375, 0.2173)
## Iteration: 10 (-522868.5548, 0.0238)
## Iteration: 20 (-522867.5957, 0.0235)
## Iteration: 30 (-522866.6726, 0.0233)
## Iteration: 40 (-522865.7719, 0.0232)
## Iteration: 50 (-522864.8880, 0.0230)
## Group probs = (0.8258, 0.1369, 0.0374)
##
## Outer iteration: 34
## Iteration: 1 (-522044.7296, 0.0619)
## Iteration: 10 (-522043.9006, 0.0231)
## Iteration: 20 (-522043.0203, 0.0228)

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## Iteration: 30 (-522042.1578, 0.0227)
## Iteration: 40 (-522041.3091, 0.0225)
## Iteration: 50 (-522040.4726, 0.0223)
## Group probs = (0.8261, 0.1366, 0.0373)
##
## Outer iteration: 35
## Iteration: 1 (-522421.6654, 0.0767)
## Iteration: 10 (-522420.9068, 0.0221)
## Iteration: 20 (-522420.0962, 0.0220)
## Iteration: 30 (-522419.2966, 0.0218)
## Iteration: 40 (-522418.5072, 0.0217)
## Iteration: 50 (-522417.7274, 0.0216)
## Group probs = (0.8263, 0.1365, 0.0372)
##
## Outer iteration: 36
## Iteration: 1 (-522572.4177, 0.0219)
## Iteration: 10 (-522571.7017, 0.0215)
## Iteration: 20 (-522570.9211, 0.0214)
## Iteration: 30 (-522570.1504, 0.0213)
## Iteration: 40 (-522569.3891, 0.0211)
## Iteration: 50 (-522568.6369, 0.0210)
## Group probs = (0.8262, 0.1366, 0.0372)
##
## Outer iteration: 37
## Iteration: 1 (-522444.7915, 0.0569)
## Iteration: 10 (-522444.0876, 0.0211)
## Iteration: 20 (-522443.3231, 0.0209)
## Iteration: 30 (-522442.5690, 0.0208)
## Iteration: 40 (-522441.8244, 0.0207)
## Iteration: 50 (-522441.0888, 0.0206)
## Group probs = (0.8308, 0.1335, 0.0357)
##
## Outer iteration: 38
## Iteration: 1 (-526941.6891, 0.2419)
## Iteration: 10 (-526940.5960, 0.0200)
## Iteration: 20 (-526939.8034, 0.0203)
## Iteration: 30 (-526939.0566, 0.0203)
## Iteration: 40 (-526938.3285, 0.0202)
## Iteration: 50 (-526937.6122, 0.0202)
## Group probs = (0.8274, 0.1356, 0.0369)
##
## Outer iteration: 39
## Iteration: 1 (-523618.9032, 0.2152)
## Iteration: 10 (-523618.0742, 0.0209)
## Iteration: 20 (-523617.3472, 0.0203)
## Iteration: 30 (-523616.6426, 0.0200)
## Iteration: 40 (-523615.9492, 0.0198)
## Iteration: 50 (-523615.2646, 0.0197)
## Group probs = (0.8239, 0.1381, 0.0380)
##
## Outer iteration: 40
## Iteration: 1 (-520188.5080, 0.3634)
## Iteration: 10 (-520187.4296, 0.0211)
## Iteration: 20 (-520186.6372, 0.0203)
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## Iteration: 30 (-520185.8916, 0.0200)
## Iteration: 40 (-520185.1685, 0.0197)
## Iteration: 50 (-520184.4603, 0.0196)
## Group probs = (0.8252, 0.1372, 0.0375)
##
## Outer iteration: 1
## Iteration: 1 (-564134.6822, Inf)
## Iteration: 10 (-517777.1835, 4.6010)
## Iteration: 20 (-514219.5802, 2.0824)
## Iteration: 30 (-512871.8836, 1.3485)
## Iteration: 40 (-512125.9161, 1.0003)
## Iteration: 50 (-511639.4098, 0.7969)
## Group probs = (0.8208, 0.1398, 0.0394)
##
## Outer iteration: 2
## Iteration: 1 (-519016.0391, 1.4824)
## Iteration: 10 (-518754.4856, 0.6289)
## Iteration: 20 (-518547.2750, 0.5357)
## Iteration: 30 (-518386.0610, 0.4666)
## Iteration: 40 (-518256.2421, 0.4134)
## Iteration: 50 (-518149.0804, 0.3712)
## Group probs = (0.8233, 0.1387, 0.0380)
##
## Outer iteration: 3
## Iteration: 1 (-520581.6600, 0.6298)
## Iteration: 10 (-520500.1022, 0.3362)
## Iteration: 20 (-520422.8089, 0.3084)
## Iteration: 30 (-520356.0156, 0.2845)
## Iteration: 40 (-520297.6199, 0.2639)
## Iteration: 50 (-520246.0831, 0.2461)
## Group probs = (0.8260, 0.1372, 0.0368)
##
## Outer iteration: 4
## Iteration: 1 (-522794.1292, 0.4206)
## Iteration: 10 (-522751.9764, 0.2305)
## Iteration: 20 (-522710.1742, 0.2172)
## Iteration: 30 (-522672.5527, 0.2052)
## Iteration: 40 (-522638.4778, 0.1943)
## Iteration: 50 (-522607.4563, 0.1845)
## Group probs = (0.8279, 0.1360, 0.0361)
##
## Outer iteration: 5
## Iteration: 1 (-524551.0308, 0.3275)
## Iteration: 10 (-524524.9382, 0.1759)
## Iteration: 20 (-524498.4378, 0.1679)
## Iteration: 30 (-524474.0545, 0.1606)
## Iteration: 40 (-524451.5242, 0.1538)
## Iteration: 50 (-524430.6364, 0.1476)
## Group probs = (0.8280, 0.1360, 0.0359)
##
## Outer iteration: 6
## Iteration: 1 (-524564.1961, 0.1512)
## Iteration: 10 (-524546.3661, 0.1424)
## Iteration: 20 (-524527.9381, 0.1369)
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## Iteration: 30 (-524510.7299, 0.1319)
## Iteration: 40 (-524494.6171, 0.1273)
## Iteration: 50 (-524479.4962, 0.1230)
## Group probs = (0.8276, 0.1364, 0.0361)
##
## Outer iteration: 7
## Iteration: 1 (-524045.8859, 0.1458)
## Iteration: 10 (-524032.8026, 0.1195)
## Iteration: 20 (-524019.2324, 0.1154)
## Iteration: 30 (-524006.4465, 0.1117)
## Iteration: 40 (-523994.3676, 0.1084)
## Iteration: 50 (-523982.9356, 0.1052)
## Group probs = (0.8263, 0.1372, 0.0365)
##
## Outer iteration: 8
## Iteration: 1 (-522664.9525, 0.1409)
## Iteration: 10 (-522654.9281, 0.1028)
## Iteration: 20 (-522644.4057, 0.0998)
## Iteration: 30 (-522634.4147, 0.0970)
## Iteration: 40 (-522624.9113, 0.0944)
## Iteration: 50 (-522615.8593, 0.0920)
## Group probs = (0.8236, 0.1391, 0.0373)
##
## Outer iteration: 9
## Iteration: 1 (-520076.6136, 0.2492)
## Iteration: 10 (-520068.4795, 0.0908)
## Iteration: 20 (-520060.0599, 0.0880)
## Iteration: 30 (-520052.0279, 0.0858)
## Iteration: 40 (-520044.3490, 0.0837)
## Iteration: 50 (-520036.9984, 0.0818)
## Group probs = (0.8219, 0.1404, 0.0377)
##
## Outer iteration: 10
## Iteration: 1 (-518327.0002, 0.2039)
## Iteration: 10 (-518320.3926, 0.0808)
## Iteration: 20 (-518313.4440, 0.0787)
## Iteration: 30 (-518306.7843, 0.0769)
## Iteration: 40 (-518300.3909, 0.0753)
## Iteration: 50 (-518294.2467, 0.0737)
## Group probs = (0.8209, 0.1412, 0.0379)
##
## Outer iteration: 11
## Iteration: 1 (-517363.2132, 0.2572)
## Iteration: 10 (-517357.5081, 0.0730)
## Iteration: 20 (-517351.5305, 0.0715)
## Iteration: 30 (-517345.8056, 0.0700)
## Iteration: 40 (-517340.3013, 0.0687)
## Iteration: 50 (-517334.9995, 0.0674)
## Group probs = (0.8234, 0.1395, 0.0370)
##
## Outer iteration: 12
## Iteration: 1 (-519844.6760, 0.3292)
## Iteration: 10 (-519839.9767, 0.0659)
## Iteration: 20 (-519835.0391, 0.0648)

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## Iteration: 30 (-519830.2794, 0.0636)
## Iteration: 40 (-519825.6821, 0.0625)
## Iteration: 50 (-519821.2371, 0.0614)
## Group probs = (0.8263, 0.1376, 0.0361)
##
## Outer iteration: 13
## Iteration: 1 (-522637.3002, 0.1633)
## Iteration: 10 (-522633.1766, 0.0602)
## Iteration: 20 (-522628.8953, 0.0595)
## Iteration: 30 (-522624.7596, 0.0586)
## Iteration: 40 (-522620.7551, 0.0577)
## Iteration: 50 (-522616.8739, 0.0568)
## Group probs = (0.8257, 0.1377, 0.0365)
##
## Outer iteration: 14
## Iteration: 1 (-521904.5533, 0.0650)
## Iteration: 10 (-521901.0727, 0.0560)
## Iteration: 20 (-521897.3701, 0.0550)
## Iteration: 30 (-521893.7828, 0.0542)
## Iteration: 40 (-521890.3020, 0.0533)
## Iteration: 50 (-521886.9219, 0.0525)
## Group probs = (0.8259, 0.1376, 0.0365)
##
## Outer iteration: 15
## Iteration: 1 (-522124.5746, 0.0596)
## Iteration: 10 (-522121.5712, 0.0520)
## Iteration: 20 (-522118.3442, 0.0511)
## Iteration: 30 (-522115.2085, 0.0503)
## Iteration: 40 (-522112.1587, 0.0496)
## Iteration: 50 (-522109.1909, 0.0489)
## Group probs = (0.8268, 0.1369, 0.0363)
##
## Outer iteration: 16
## Iteration: 1 (-522975.6254, 0.0811)
## Iteration: 10 (-522972.9499, 0.0483)
## Iteration: 20 (-522970.0772, 0.0477)
## Iteration: 30 (-522967.2811, 0.0470)
## Iteration: 40 (-522964.5575, 0.0464)
## Iteration: 50 (-522961.9031, 0.0458)
## Group probs = (0.8246, 0.1384, 0.0370)
##
## Outer iteration: 17
## Iteration: 1 (-520765.9474, 0.1577)
## Iteration: 10 (-520763.4121, 0.0459)
## Iteration: 20 (-520760.8515, 0.0449)
## Iteration: 30 (-520758.3642, 0.0442)
## Iteration: 40 (-520755.9394, 0.0436)
## Iteration: 50 (-520753.5732, 0.0430)
## Group probs = (0.8271, 0.1366, 0.0363)
##
## Outer iteration: 18
## Iteration: 1 (-523231.3295, 0.2174)
## Iteration: 10 (-523229.0608, 0.0422)
## Iteration: 20 (-523226.7622, 0.0419)
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## Iteration: 30 (-523224.5248, 0.0415)
## Iteration: 40 (-523222.3410, 0.0410)
## Iteration: 50 (-523220.2078, 0.0405)
## Group probs = (0.8236, 0.1389, 0.0375)
##
## Outer iteration: 19
## Iteration: 1 (-519797.9641, 0.3920)
## Iteration: 10 (-519795.7344, 0.0412)
## Iteration: 20 (-519793.5482, 0.0403)
## Iteration: 30 (-519791.4387, 0.0397)
## Iteration: 40 (-519789.3858, 0.0391)
## Iteration: 50 (-519787.3825, 0.0387)
## Group probs = (0.8263, 0.1371, 0.0367)
##
## Outer iteration: 20
## Iteration: 1 (-522308.4092, 0.2168)
## Iteration: 10 (-522306.4891, 0.0379)
## Iteration: 20 (-522304.5450, 0.0377)
## Iteration: 30 (-522302.6482, 0.0374)
## Iteration: 40 (-522300.7927, 0.0370)
## Iteration: 50 (-522298.9763, 0.0367)
## Group probs = (0.8239, 0.1387, 0.0375)
##
## Outer iteration: 21
## Iteration: 1 (-520015.2800, 0.1850)
## Iteration: 10 (-520013.5347, 0.0369)
## Iteration: 20 (-520011.7551, 0.0362)
## Iteration: 30 (-520010.0197, 0.0357)
## Iteration: 40 (-520008.3213, 0.0353)
## Iteration: 50 (-520006.6574, 0.0349)
## Group probs = (0.8265, 0.1369, 0.0366)
##
## Outer iteration: 22
## Iteration: 1 (-522609.1017, 0.1735)
## Iteration: 10 (-522607.5197, 0.0343)
## Iteration: 20 (-522605.8891, 0.0342)
## Iteration: 30 (-522604.2958, 0.0339)
## Iteration: 40 (-522602.7345, 0.0336)
## Iteration: 50 (-522601.2033, 0.0333)
## Group probs = (0.8286, 0.1355, 0.0360)
##
## Outer iteration: 23
## Iteration: 1 (-524584.3448, 0.1527)
## Iteration: 10 (-524582.8904, 0.0327)
## Iteration: 20 (-524581.3901, 0.0326)
## Iteration: 30 (-524579.9230, 0.0324)
## Iteration: 40 (-524578.4845, 0.0321)
## Iteration: 50 (-524577.0727, 0.0318)
## Group probs = (0.8296, 0.1346, 0.0358)
##
## Outer iteration: 24
## Iteration: 1 (-525473.6053, 0.1040)
## Iteration: 10 (-525472.2652, 0.0313)
## Iteration: 20 (-525470.8881, 0.0312)

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## Iteration: 30 (-525469.5400, 0.0309)
## Iteration: 40 (-525468.2174, 0.0307)
## Iteration: 50 (-525466.9187, 0.0304)
## Group probs = (0.8254, 0.1374, 0.0372)
##
## Outer iteration: 25
## Iteration: 1 (-521383.9709, 0.3491)
## Iteration: 10 (-521382.3040, 0.0315)
## Iteration: 20 (-521380.9683, 0.0305)
## Iteration: 30 (-521379.6852, 0.0300)
## Iteration: 40 (-521378.4318, 0.0296)
## Iteration: 50 (-521377.2026, 0.0293)
## Group probs = (0.8258, 0.1371, 0.0371)
##
## Outer iteration: 26
## Iteration: 1 (-521812.2327, 0.0862)
## Iteration: 10 (-521811.1250, 0.0290)
## Iteration: 20 (-521809.9277, 0.0288)
## Iteration: 30 (-521808.7515, 0.0285)
## Iteration: 40 (-521807.5951, 0.0283)
## Iteration: 50 (-521806.4578, 0.0280)
## Group probs = (0.8256, 0.1372, 0.0372)
##
## Outer iteration: 27
## Iteration: 1 (-521604.0186, 0.0285)
## Iteration: 10 (-521602.9920, 0.0279)
## Iteration: 20 (-521601.8759, 0.0276)
## Iteration: 30 (-521600.7789, 0.0274)
## Iteration: 40 (-521599.6998, 0.0272)
## Iteration: 50 (-521598.6379, 0.0270)
## Group probs = (0.8253, 0.1375, 0.0372)
##
## Outer iteration: 28
## Iteration: 1 (-521329.1152, 0.0931)
## Iteration: 10 (-521328.1146, 0.0270)
## Iteration: 20 (-521327.0434, 0.0268)
## Iteration: 30 (-521325.9924, 0.0265)
## Iteration: 40 (-521324.9593, 0.0263)
## Iteration: 50 (-521323.9428, 0.0261)
## Group probs = (0.8261, 0.1370, 0.0369)
##
## Outer iteration: 29
## Iteration: 1 (-522107.3165, 0.0444)
## Iteration: 10 (-522106.3826, 0.0259)
## Iteration: 20 (-522105.3774, 0.0258)
## Iteration: 30 (-522104.3890, 0.0256)
## Iteration: 40 (-522103.4160, 0.0254)
## Iteration: 50 (-522102.4577, 0.0253)
## Group probs = (0.8257, 0.1373, 0.0370)
##
## Outer iteration: 30
## Iteration: 1 (-521753.6454, 0.0581)
## Iteration: 10 (-521752.7546, 0.0253)
## Iteration: 20 (-521751.8086, 0.0250)

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## Iteration: 30 (-521750.8798, 0.0248)
## Iteration: 40 (-521749.9657, 0.0246)
## Iteration: 50 (-521749.0652, 0.0244)
## Group probs = (0.8269, 0.1365, 0.0366)
##
## Outer iteration: 31
## Iteration: 1 (-522849.5934, 0.0899)
## Iteration: 10 (-522848.7553, 0.0241)
## Iteration: 20 (-522847.8638, 0.0241)
## Iteration: 30 (-522846.9861, 0.0239)
## Iteration: 40 (-522846.1208, 0.0238)
## Iteration: 50 (-522845.2677, 0.0236)
## Group probs = (0.8276, 0.1360, 0.0364)
##
## Outer iteration: 32
## Iteration: 1 (-523586.2499, 0.0275)
## Iteration: 10 (-523585.4629, 0.0235)
## Iteration: 20 (-523584.6138, 0.0234)
## Iteration: 30 (-523583.7782, 0.0232)
## Iteration: 40 (-523582.9546, 0.0231)
## Iteration: 50 (-523582.1423, 0.0229)
## Group probs = (0.8275, 0.1359, 0.0365)
##
## Outer iteration: 33
## Iteration: 1 (-523433.7003, 0.0231)
## Iteration: 10 (-523432.9625, 0.0229)
## Iteration: 20 (-523432.1592, 0.0227)
## Iteration: 30 (-523431.3671, 0.0225)
## Iteration: 40 (-523430.5855, 0.0224)
## Iteration: 50 (-523429.8143, 0.0222)
## Group probs = (0.8280, 0.1357, 0.0364)
##
## Outer iteration: 34
## Iteration: 1 (-523870.7228, 0.0419)
## Iteration: 10 (-523869.9934, 0.0222)
## Iteration: 20 (-523869.2096, 0.0221)
## Iteration: 30 (-523868.4387, 0.0220)
## Iteration: 40 (-523867.6789, 0.0219)
## Iteration: 50 (-523866.9293, 0.0217)
## Group probs = (0.8255, 0.1372, 0.0373)
##
## Outer iteration: 35
## Iteration: 1 (-521455.7995, 0.2246)
## Iteration: 10 (-521454.9904, 0.0223)
## Iteration: 20 (-521454.2012, 0.0219)
## Iteration: 30 (-521453.4350, 0.0216)
## Iteration: 40 (-521452.6833, 0.0214)
## Iteration: 50 (-521451.9434, 0.0213)
## Group probs = (0.8271, 0.1361, 0.0368)
##
## Outer iteration: 36
## Iteration: 1 (-522998.0062, 0.2200)
## Iteration: 10 (-522997.3222, 0.0209)
## Iteration: 20 (-522996.6198, 0.0207)
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## Iteration: 30 (-522995.9329, 0.0206)
## Iteration: 40 (-522995.2572, 0.0205)
## Iteration: 50 (-522994.5908, 0.0204)
## Group probs = (0.8277, 0.1356, 0.0367)
##
## Outer iteration: 37
## Iteration: 1 (-523508.1536, 0.0510)
## Iteration: 10 (-523507.4932, 0.0201)
## Iteration: 20 (-523506.8217, 0.0201)
## Iteration: 30 (-523506.1615, 0.0200)
## Iteration: 40 (-523505.5106, 0.0199)
## Iteration: 50 (-523504.8680, 0.0198)
## Group probs = (0.8312, 0.1331, 0.0358)
##
## Outer iteration: 38
## Iteration: 1 (-526928.4698, 0.3943)
## Iteration: 10 (-526927.5152, 0.0193)
## Iteration: 20 (-526926.8468, 0.0192)
## Iteration: 30 (-526926.2244, 0.0192)
## Iteration: 40 (-526925.6248, 0.0191)
## Iteration: 50 (-526925.0397, 0.0190)
## Group probs = (0.8290, 0.1345, 0.0365)
##
## Outer iteration: 39
## Iteration: 1 (-524787.4694, 0.1817)
## Iteration: 10 (-524786.8000, 0.0194)
## Iteration: 20 (-524786.2037, 0.0190)
## Iteration: 30 (-524785.6237, 0.0188)
## Iteration: 40 (-524785.0531, 0.0187)
## Iteration: 50 (-524784.4898, 0.0186)
## Group probs = (0.8252, 0.1372, 0.0377)
##
## Outer iteration: 40
## Iteration: 1 (-521039.9967, 0.4401)
## Iteration: 10 (-521039.0023, 0.0199)
## Iteration: 20 (-521038.3094, 0.0192)
## Iteration: 30 (-521037.6691, 0.0189)
## Iteration: 40 (-521037.0540, 0.0187)
## Iteration: 50 (-521036.4543, 0.0186)
## Group probs = (0.8233, 0.1384, 0.0384)
##
## Outer iteration: 1
## Iteration: 1 (-563151.6163,   Inf)
## Iteration: 10 (-516791.0017, 4.6002)
## Iteration: 20 (-513229.6917, 2.0821)
## Iteration: 30 (-511882.1060, 1.3482)
## Iteration: 40 (-511136.9847, 1.0000)
## Iteration: 50 (-510651.4062, 0.7965)
## Group probs = (0.8155, 0.1439, 0.0406)
##
## Outer iteration: 2
## Iteration: 1 (-514357.2873, 1.1516)
## Iteration: 10 (-514096.3847, 0.6308)
## Iteration: 20 (-513887.8965, 0.5371)

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## Iteration: 30 (-513725.4283, 0.4680)
## Iteration: 40 (-513594.4482, 0.4148)
## Iteration: 50 (-513486.2194, 0.3726)
## Group probs = (0.8155, 0.1444, 0.0401)
##
## Outer iteration: 3
## Iteration: 1 (-513467.8743, 0.4484)
## Iteration: 10 (-513385.5203, 0.3380)
## Iteration: 20 (-513307.1618, 0.3100)
## Iteration: 30 (-513239.3609, 0.2861)
## Iteration: 40 (-513180.0335, 0.2655)
## Iteration: 50 (-513127.6349, 0.2476)
## Group probs = (0.8202, 0.1415, 0.0383)
##
## Outer iteration: 4
## Iteration: 1 (-517899.1553, 0.5448)
## Iteration: 10 (-517856.2283, 0.2321)
## Iteration: 20 (-517813.6061, 0.2189)
## Iteration: 30 (-517775.2031, 0.2068)
## Iteration: 40 (-517740.3883, 0.1959)
## Iteration: 50 (-517708.6661, 0.1860)
## Group probs = (0.8237, 0.1392, 0.0371)
##
## Outer iteration: 5
## Iteration: 1 (-520991.8804, 0.3371)
## Iteration: 10 (-520964.8531, 0.1772)
## Iteration: 20 (-520937.4841, 0.1695)
## Iteration: 30 (-520912.2746, 0.1623)
## Iteration: 40 (-520888.9615, 0.1555)
## Iteration: 50 (-520867.3319, 0.1493)
## Group probs = (0.8241, 0.1390, 0.0370)
##
## Outer iteration: 6
## Iteration: 1 (-521347.9609, 0.1508)
## Iteration: 10 (-521329.4320, 0.1443)
## Iteration: 20 (-521310.1831, 0.1389)
## Iteration: 30 (-521292.1867, 0.1339)
## Iteration: 40 (-521275.3217, 0.1292)
## Iteration: 50 (-521259.4829, 0.1248)
## Group probs = (0.8231, 0.1396, 0.0373)
##
## Outer iteration: 7
## Iteration: 1 (-520292.8790, 0.1525)
## Iteration: 10 (-520279.1510, 0.1216)
## Iteration: 20 (-520264.7726, 0.1175)
## Iteration: 30 (-520251.2005, 0.1139)
## Iteration: 40 (-520238.3656, 0.1104)
## Iteration: 50 (-520226.2082, 0.1072)
## Group probs = (0.8247, 0.1384, 0.0369)
##
## Outer iteration: 8
## Iteration: 1 (-521737.1978, 0.2245)
## Iteration: 10 (-521726.5562, 0.1044)
## Iteration: 20 (-521715.4065, 0.1015)

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## Iteration: 30 (-521704.8103, 0.0988)
## Iteration: 40 (-521694.7228, 0.0963)
## Iteration: 50 (-521685.1065, 0.0938)
## Group probs = (0.8255, 0.1376, 0.0368)
##
## Outer iteration: 9
## Iteration: 1 (-522430.1209, 0.1243)
## Iteration: 10 (-522421.6023, 0.0917)
## Iteration: 20 (-522412.6112, 0.0895)
## Iteration: 30 (-522404.0186, 0.0874)
## Iteration: 40 (-522395.7956, 0.0854)
## Iteration: 50 (-522387.9177, 0.0835)
## Group probs = (0.8253, 0.1377, 0.0370)
##
## Outer iteration: 10
## Iteration: 1 (-522230.1225, 0.1549)
## Iteration: 10 (-522223.1516, 0.0820)
## Iteration: 20 (-522215.8426, 0.0799)
## Iteration: 30 (-522208.8445, 0.0781)
## Iteration: 40 (-522202.1238, 0.0765)
## Iteration: 50 (-522195.6602, 0.0749)
## Group probs = (0.8260, 0.1371, 0.0369)
##
## Outer iteration: 11
## Iteration: 1 (-522762.5738, 0.1330)
## Iteration: 10 (-522756.6501, 0.0737)
## Iteration: 20 (-522750.3733, 0.0725)
## Iteration: 30 (-522744.3338, 0.0711)
## Iteration: 40 (-522738.5120, 0.0698)
## Iteration: 50 (-522732.8944, 0.0685)
## Group probs = (0.8231, 0.1390, 0.0379)
##
## Outer iteration: 12
## Iteration: 1 (-519936.0725, 0.0955)
## Iteration: 10 (-519930.9149, 0.0680)
## Iteration: 20 (-519925.6631, 0.0662)
## Iteration: 30 (-519920.6096, 0.0648)
## Iteration: 40 (-519915.7257, 0.0636)
## Iteration: 50 (-519910.9993, 0.0625)
## Group probs = (0.8208, 0.1406, 0.0385)
##
## Outer iteration: 13
## Iteration: 1 (-517728.0947, 0.2090)
## Iteration: 10 (-517723.7178, 0.0623)
## Iteration: 20 (-517719.1481, 0.0608)
## Iteration: 30 (-517714.7293, 0.0597)
## Iteration: 40 (-517710.4466, 0.0587)
## Iteration: 50 (-517706.2920, 0.0578)
## Group probs = (0.8232, 0.1392, 0.0377)
##
## Outer iteration: 14
## Iteration: 1 (-519998.9105, 0.0751)
## Iteration: 10 (-519995.0188, 0.0569)
## Iteration: 20 (-519990.9322, 0.0563)
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## Iteration: 30 (-519986.9754, 0.0555)
## Iteration: 40 (-519983.1340, 0.0547)
## Iteration: 50 (-519979.4004, 0.0539)
## Group probs = (0.8234, 0.1390, 0.0376)
##
## Outer iteration: 15
## Iteration: 1 (-520134.9741, 0.0772)
## Iteration: 10 (-520131.6718, 0.0533)
## Iteration: 20 (-520128.1082, 0.0525)
## Iteration: 30 (-520124.6399, 0.0517)
## Iteration: 40 (-520121.2628, 0.0510)
## Iteration: 50 (-520117.9731, 0.0503)
## Group probs = (0.8232, 0.1390, 0.0377)
##
## Outer iteration: 16
## Iteration: 1 (-520029.7295, 0.0557)
## Iteration: 10 (-520026.7804, 0.0499)
## Iteration: 20 (-520023.6088, 0.0491)
## Iteration: 30 (-520020.5180, 0.0484)
## Iteration: 40 (-520017.5036, 0.0477)
## Iteration: 50 (-520014.5625, 0.0471)
## Group probs = (0.8229, 0.1392, 0.0379)
##
## Outer iteration: 17
## Iteration: 1 (-519647.6424, 0.0793)
## Iteration: 10 (-519644.9743, 0.0468)
## Iteration: 20 (-519642.0874, 0.0462)
## Iteration: 30 (-519639.2701, 0.0456)
## Iteration: 40 (-519636.5188, 0.0450)
## Iteration: 50 (-519633.8310, 0.0444)
## Group probs = (0.8242, 0.1384, 0.0374)
##
## Outer iteration: 18
## Iteration: 1 (-520899.1786, 0.0824)
## Iteration: 10 (-520896.5767, 0.0441)
## Iteration: 20 (-520893.8512, 0.0438)
## Iteration: 30 (-520891.2053, 0.0434)
## Iteration: 40 (-520888.6247, 0.0429)
## Iteration: 50 (-520886.1033, 0.0424)
## Group probs = (0.8260, 0.1371, 0.0368)
##
## Outer iteration: 19
## Iteration: 1 (-522707.8554, 0.1356)
## Iteration: 10 (-522705.5769, 0.0418)
## Iteration: 20 (-522703.1391, 0.0415)
## Iteration: 30 (-522700.7577, 0.0410)
## Iteration: 40 (-522698.4277, 0.0406)
## Iteration: 50 (-522696.1465, 0.0402)
## Group probs = (0.8273, 0.1360, 0.0367)
##
## Outer iteration: 20
## Iteration: 1 (-523790.9887, 0.1937)
## Iteration: 10 (-523788.8434, 0.0395)
## Iteration: 20 (-523786.6346, 0.0391)
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## Iteration: 30 (-523784.4790, 0.0387)
## Iteration: 40 (-523782.3697, 0.0383)
## Iteration: 50 (-523780.3036, 0.0380)
## Group probs = (0.8259, 0.1368, 0.0373)
##
## Outer iteration: 21
## Iteration: 1 (-522370.4486, 0.1448)
## Iteration: 10 (-522368.5324, 0.0380)
## Iteration: 20 (-522366.4700, 0.0375)
## Iteration: 30 (-522364.4510, 0.0371)
## Iteration: 40 (-522362.4715, 0.0367)
## Iteration: 50 (-522360.5297, 0.0363)
## Group probs = (0.8270, 0.1359, 0.0371)
##
## Outer iteration: 22
## Iteration: 1 (-523543.9879, 0.1695)
## Iteration: 10 (-523542.2218, 0.0358)
## Iteration: 20 (-523540.3506, 0.0355)
## Iteration: 30 (-523538.5184, 0.0351)
## Iteration: 40 (-523536.7211, 0.0348)
## Iteration: 50 (-523534.9568, 0.0345)
## Group probs = (0.8266, 0.1361, 0.0373)
##
## Outer iteration: 23
## Iteration: 1 (-523066.3345, 0.0346)
## Iteration: 10 (-523064.7106, 0.0344)
## Iteration: 20 (-523062.9640, 0.0339)
## Iteration: 30 (-523061.2534, 0.0336)
## Iteration: 40 (-523059.5745, 0.0333)
## Iteration: 50 (-523057.9251, 0.0330)
## Group probs = (0.8273, 0.1357, 0.0370)
##
## Outer iteration: 24
## Iteration: 1 (-523754.9929, 0.0483)
## Iteration: 10 (-523753.4522, 0.0329)
## Iteration: 20 (-523751.7946, 0.0326)
## Iteration: 30 (-523750.1670, 0.0324)
## Iteration: 40 (-523748.5668, 0.0321)
## Iteration: 50 (-523746.9930, 0.0318)
## Group probs = (0.8274, 0.1356, 0.0370)
##
## Outer iteration: 25
## Iteration: 1 (-523872.3150, 0.0318)
## Iteration: 10 (-523870.9032, 0.0317)
## Iteration: 20 (-523869.3676, 0.0314)
## Iteration: 30 (-523867.8567, 0.0311)
## Iteration: 40 (-523866.3695, 0.0308)
## Iteration: 50 (-523864.9054, 0.0306)
## Group probs = (0.8237, 0.1380, 0.0383)
##
## Outer iteration: 26
## Iteration: 1 (-520159.5221, 0.3360)
## Iteration: 10 (-520157.8918, 0.0315)
## Iteration: 20 (-520156.3509, 0.0307)
```

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## Iteration: 30 (-520154.8598, 0.0303)
## Iteration: 40 (-520153.4001, 0.0300)
## Iteration: 50 (-520151.9665, 0.0297)
## Group probs = (0.8233, 0.1383, 0.0384)
##
## Outer iteration: 27
## Iteration: 1 (-519847.5321, 0.0749)
## Iteration: 10 (-519846.2184, 0.0297)
## Iteration: 20 (-519844.8311, 0.0292)
## Iteration: 30 (-519843.4721, 0.0289)
## Iteration: 40 (-519842.1351, 0.0286)
## Iteration: 50 (-519840.8181, 0.0284)
## Group probs = (0.8238, 0.1380, 0.0382)
##
## Outer iteration: 28
## Iteration: 1 (-520418.9979, 0.0310)
## Iteration: 10 (-520417.7878, 0.0283)
## Iteration: 20 (-520416.4686, 0.0281)
## Iteration: 30 (-520415.1690, 0.0279)
## Iteration: 40 (-520413.8880, 0.0277)
## Iteration: 50 (-520412.6248, 0.0275)
## Group probs = (0.8225, 0.1390, 0.0385)
##
## Outer iteration: 29
## Iteration: 1 (-518979.6310, 0.2746)
## Iteration: 10 (-518978.2231, 0.0280)
## Iteration: 20 (-518976.8287, 0.0277)
## Iteration: 30 (-518975.4905, 0.0275)
## Iteration: 40 (-518974.1861, 0.0273)
## Iteration: 50 (-518972.9067, 0.0271)
## Group probs = (0.8224, 0.1390, 0.0385)
##
## Outer iteration: 30
## Iteration: 1 (-518919.3327, 0.0275)
## Iteration: 10 (-518918.1539, 0.0270)
## Iteration: 20 (-518916.8844, 0.0268)
## Iteration: 30 (-518915.6368, 0.0266)
## Iteration: 40 (-518914.4079, 0.0264)
## Iteration: 50 (-518913.1963, 0.0262)
## Group probs = (0.8239, 0.1380, 0.0381)
##
## Outer iteration: 31
## Iteration: 1 (-520356.8763, 0.1222)
## Iteration: 10 (-520355.7204, 0.0258)
## Iteration: 20 (-520354.5247, 0.0258)
## Iteration: 30 (-520353.3477, 0.0257)
## Iteration: 40 (-520352.1865, 0.0255)
## Iteration: 50 (-520351.0404, 0.0254)
## Group probs = (0.8225, 0.1390, 0.0385)
##
## Outer iteration: 32
## Iteration: 1 (-519023.7041, 0.1184)
## Iteration: 10 (-519022.5797, 0.0258)
## Iteration: 20 (-519021.4244, 0.0254)

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## Iteration: 30 (-519020.2894, 0.0251)
## Iteration: 40 (-519019.1700, 0.0249)
## Iteration: 50 (-519018.0648, 0.0247)
## Group probs = (0.8222, 0.1391, 0.0387)
##
## Outer iteration: 33
## Iteration: 1 (-518743.9861, 0.0722)
## Iteration: 10 (-518742.9479, 0.0247)
## Iteration: 20 (-518741.8588, 0.0244)
## Iteration: 30 (-518740.7927, 0.0241)
## Iteration: 40 (-518739.7424, 0.0239)
## Iteration: 50 (-518738.7055, 0.0238)
## Group probs = (0.8236, 0.1381, 0.0383)
##
## Outer iteration: 34
## Iteration: 1 (-520079.6799, 0.2624)
## Iteration: 10 (-520078.5603, 0.0234)
## Iteration: 20 (-520077.5118, 0.0232)
## Iteration: 30 (-520076.5061, 0.0230)
## Iteration: 40 (-520075.5249, 0.0229)
## Iteration: 50 (-520074.5608, 0.0227)
## Group probs = (0.8204, 0.1402, 0.0393)
##
## Outer iteration: 35
## Iteration: 1 (-516983.9587, 0.3157)
## Iteration: 10 (-516982.8767, 0.0236)
## Iteration: 20 (-516981.8545, 0.0231)
## Iteration: 30 (-516980.8570, 0.0228)
## Iteration: 40 (-516979.8746, 0.0226)
## Iteration: 50 (-516978.9045, 0.0225)
## Group probs = (0.8213, 0.1397, 0.0390)
##
## Outer iteration: 36
## Iteration: 1 (-517810.2251, 0.0864)
## Iteration: 10 (-517809.3382, 0.0222)
## Iteration: 20 (-517808.3787, 0.0221)
## Iteration: 30 (-517807.4308, 0.0220)
## Iteration: 40 (-517806.4933, 0.0219)
## Iteration: 50 (-517805.5657, 0.0218)
## Group probs = (0.8234, 0.1383, 0.0383)
##
## Outer iteration: 37
## Iteration: 1 (-519895.7445, 0.1774)
## Iteration: 10 (-519894.8276, 0.0213)
## Iteration: 20 (-519893.9075, 0.0214)
## Iteration: 30 (-519893.0023, 0.0214)
## Iteration: 40 (-519892.1080, 0.0213)
## Iteration: 50 (-519891.2233, 0.0212)
## Group probs = (0.8235, 0.1382, 0.0383)
##
## Outer iteration: 38
## Iteration: 1 (-519989.1621, 0.0368)
## Iteration: 10 (-519988.3459, 0.0212)
## Iteration: 20 (-519987.4642, 0.0210)

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## Iteration: 30 (-519986.5943, 0.0209)
## Iteration: 40 (-519985.7339, 0.0208)
## Iteration: 50 (-519984.8824, 0.0206)
## Group probs = (0.8225, 0.1388, 0.0386)
##
## Outer iteration: 39
## Iteration: 1 (-519004.6000, 0.1249)
## Iteration: 10 (-519003.7764, 0.0209)
## Iteration: 20 (-519002.8903, 0.0207)
## Iteration: 30 (-519002.0159, 0.0206)
## Iteration: 40 (-519001.1510, 0.0205)
## Iteration: 50 (-519000.2947, 0.0204)
## Group probs = (0.8198, 0.1407, 0.0395)
##
## Outer iteration: 40
## Iteration: 1 (-516356.6912, 0.1628)
## Iteration: 10 (-516355.7128, 0.0212)
## Iteration: 20 (-516354.8348, 0.0206)
## Iteration: 30 (-516353.9831, 0.0203)
## Iteration: 40 (-516353.1439, 0.0201)
## Iteration: 50 (-516352.3140, 0.0199)
## Group probs = (0.8203, 0.1404, 0.0394)

```

```
toc()
```

```
## 40153.466 sec elapsed
```

```

tic()
load("../fits/two_dim_fit/all_results_2d.RData")
res_2d <- all_res
rm(all_res)
perp_2d <- map_df(names(res_2d),
  function(nm) {
    cat(paste0(nm, "\n"))
    cv_perplexity(appended_data %>%
      filter(source==nm) %>%
      ungroup() %>%
      select(res_2d[[nm]]$item_summary$item) %>%
      as.matrix(),
      fit=res_2d[[nm]])
  }) %>%
mutate(survey = rep(names(res_2d), each=2))

```

```

## CCES_2012
## Outer iteration: 1
## Iteration: 1 (-190075.2186, Inf)
## Iteration: 10 (-156402.3414, 8.5028)
## Iteration: 20 (-151370.5852, 4.3422)
## Iteration: 30 (-148986.1283, 2.9251)
## Iteration: 40 (-147528.1783, 2.1984)
## Iteration: 50 (-146500.2879, 1.7724)
## Group probs = (0.6519, 0.2851, 0.0630)
##
## Outer iteration: 2
## Iteration: 1 (-160409.9384, 2.0447)

```

```
## Iteration: 10 (-159863.5967, 1.3171)
## Iteration: 20 (-159413.8414, 1.1336)
## Iteration: 30 (-159044.8888, 1.0045)
## Iteration: 40 (-158731.3826, 0.9056)
## Iteration: 50 (-158459.0241, 0.8264)
## Group probs = (0.6641, 0.2753, 0.0606)
##
## Outer iteration: 3
## Iteration: 1 (-162858.1988, 1.3254)
## Iteration: 10 (-162621.2726, 0.7747)
## Iteration: 20 (-162389.6658, 0.7207)
## Iteration: 30 (-162181.9346, 0.6731)
## Iteration: 40 (-161993.6180, 0.6315)
## Iteration: 50 (-161821.5422, 0.5948)
## Group probs = (0.6665, 0.2745, 0.0590)
##
## Outer iteration: 4
## Iteration: 1 (-162662.7007, 1.1294)
## Iteration: 10 (-162506.9734, 0.5731)
## Iteration: 20 (-162348.4538, 0.5450)
## Iteration: 30 (-162201.9082, 0.5185)
## Iteration: 40 (-162065.6087, 0.4942)
## Iteration: 50 (-161938.2453, 0.4720)
## Group probs = (0.6729, 0.2696, 0.0575)
##
## Outer iteration: 5
## Iteration: 1 (-164477.4595, 0.8869)
## Iteration: 10 (-164356.9725, 0.4611)
## Iteration: 20 (-164232.9734, 0.4441)
## Iteration: 30 (-164116.7734, 0.4268)
## Iteration: 40 (-164007.2887, 0.4105)
## Iteration: 50 (-163903.7383, 0.3953)
## Group probs = (0.6726, 0.2697, 0.0577)
##
## Outer iteration: 6
## Iteration: 1 (-163411.2117, 0.5635)
## Iteration: 10 (-163315.5181, 0.3885)
## Iteration: 20 (-163215.1958, 0.3755)
## Iteration: 30 (-163119.9674, 0.3628)
## Iteration: 40 (-163029.2459, 0.3508)
## Iteration: 50 (-162942.5847, 0.3396)
## Group probs = (0.6743, 0.2682, 0.0575)
##
## Outer iteration: 7
## Iteration: 1 (-163495.4241, 0.5844)
## Iteration: 10 (-163414.3289, 0.3359)
## Iteration: 20 (-163328.9396, 0.3264)
## Iteration: 30 (-163247.3505, 0.3167)
## Iteration: 40 (-163169.1059, 0.3075)
## Iteration: 50 (-163093.8883, 0.2989)
## Group probs = (0.6713, 0.2706, 0.0580)
##
## Outer iteration: 8
## Iteration: 1 (-161833.7059, 0.6112)
```

```
## Iteration: 10 (-161763.3779, 0.2974)
## Iteration: 20 (-161688.9781, 0.2891)
## Iteration: 30 (-161617.5294, 0.2812)
## Iteration: 40 (-161548.6710, 0.2738)
## Iteration: 50 (-161482.1632, 0.2669)
## Group probs = (0.6689, 0.2722, 0.0589)
##
## Outer iteration: 9
## Iteration: 1 (-160440.3737, 0.3622)
## Iteration: 10 (-160377.0950, 0.2690)
## Iteration: 20 (-160310.2638, 0.2619)
## Iteration: 30 (-160245.9442, 0.2551)
## Iteration: 40 (-160183.7814, 0.2488)
## Iteration: 50 (-160123.5633, 0.2429)
## Group probs = (0.6637, 0.2761, 0.0602)
##
## Outer iteration: 10
## Iteration: 1 (-157808.7475, 1.1869)
## Iteration: 10 (-157751.2141, 0.2457)
## Iteration: 20 (-157690.8972, 0.2392)
## Iteration: 30 (-157632.8867, 0.2332)
## Iteration: 40 (-157576.7874, 0.2276)
## Iteration: 50 (-157522.3792, 0.2225)
## Group probs = (0.6605, 0.2789, 0.0606)
##
## Outer iteration: 11
## Iteration: 1 (-156324.5193, 0.4869)
## Iteration: 10 (-156274.6812, 0.2216)
## Iteration: 20 (-156221.2034, 0.2167)
## Iteration: 30 (-156169.2531, 0.2121)
## Iteration: 40 (-156118.6821, 0.2078)
## Iteration: 50 (-156069.3922, 0.2038)
## Group probs = (0.6609, 0.2783, 0.0608)
##
## Outer iteration: 12
## Iteration: 1 (-156193.5614, 0.4632)
## Iteration: 10 (-156147.6056, 0.2037)
## Iteration: 20 (-156098.1149, 0.2001)
## Iteration: 30 (-156049.9286, 0.1963)
## Iteration: 40 (-156002.9276, 0.1928)
## Iteration: 50 (-155957.0318, 0.1893)
## Group probs = (0.6583, 0.2798, 0.0619)
##
## Outer iteration: 13
## Iteration: 1 (-154815.5551, 0.4004)
## Iteration: 10 (-154773.2665, 0.1902)
## Iteration: 20 (-154727.9423, 0.1864)
## Iteration: 30 (-154683.8197, 0.1828)
## Iteration: 40 (-154640.7500, 0.1795)
## Iteration: 50 (-154598.6479, 0.1765)
## Group probs = (0.6574, 0.2799, 0.0627)
##
## Outer iteration: 14
## Iteration: 1 (-153958.7371, 0.8312)
```

```
## Iteration: 10 (-153919.1518, 0.1776)
## Iteration: 20 (-153876.8685, 0.1745)
## Iteration: 30 (-153835.6380, 0.1715)
## Iteration: 40 (-153795.3310, 0.1687)
## Iteration: 50 (-153755.8771, 0.1661)
## Group probs = (0.6559, 0.2810, 0.0631)
##
## Outer iteration: 15
## Iteration: 1 (-153139.0635, 0.8091)
## Iteration: 10 (-153103.2001, 0.1661)
## Iteration: 20 (-153064.5160, 0.1635)
## Iteration: 30 (-153026.6899, 0.1608)
## Iteration: 40 (-152989.6440, 0.1583)
## Iteration: 50 (-152953.3291, 0.1560)
## Group probs = (0.6521, 0.2841, 0.0638)
##
## Outer iteration: 16
## Iteration: 1 (-151534.1297, 0.4930)
## Iteration: 10 (-151502.1469, 0.1548)
## Iteration: 20 (-151467.4728, 0.1521)
## Iteration: 30 (-151433.4750, 0.1498)
## Iteration: 40 (-151400.0996, 0.1477)
## Iteration: 50 (-151367.3155, 0.1457)
## Group probs = (0.6492, 0.2865, 0.0642)
##
## Outer iteration: 17
## Iteration: 1 (-150251.1966, 1.1879)
## Iteration: 10 (-150220.7248, 0.1469)
## Iteration: 20 (-150187.9544, 0.1448)
## Iteration: 30 (-150155.9011, 0.1427)
## Iteration: 40 (-150124.4776, 0.1407)
## Iteration: 50 (-150093.6348, 0.1387)
## Group probs = (0.6476, 0.2877, 0.0647)
##
## Outer iteration: 18
## Iteration: 1 (-149500.8023, 1.0080)
## Iteration: 10 (-149472.3682, 0.1379)
## Iteration: 20 (-149442.0376, 0.1357)
## Iteration: 30 (-149412.3195, 0.1339)
## Iteration: 40 (-149383.1237, 0.1322)
## Iteration: 50 (-149354.4123, 0.1306)
## Group probs = (0.6465, 0.2884, 0.0651)
##
## Outer iteration: 19
## Iteration: 1 (-148908.3113, 0.6992)
## Iteration: 10 (-148882.0828, 0.1307)
## Iteration: 20 (-148853.6305, 0.1291)
## Iteration: 30 (-148825.6731, 0.1275)
## Iteration: 40 (-148798.1700, 0.1259)
## Iteration: 50 (-148771.0969, 0.1245)
## Group probs = (0.6440, 0.2906, 0.0653)
##
## Outer iteration: 20
## Iteration: 1 (-147896.1307, 0.9646)
```

```
## Iteration: 10 (-147871.2935, 0.1243)
## Iteration: 20 (-147844.6488, 0.1228)
## Iteration: 30 (-147818.5129, 0.1213)
## Iteration: 40 (-147792.8076, 0.1198)
## Iteration: 50 (-147767.4982, 0.1185)
## Group probs = (0.6447, 0.2899, 0.0654)
##
## Outer iteration: 21
## Iteration: 1 (-147977.2258, 0.6309)
## Iteration: 10 (-147953.4409, 0.1188)
## Iteration: 20 (-147927.8228, 0.1178)
## Iteration: 30 (-147902.6874, 0.1165)
## Iteration: 40 (-147877.9733, 0.1152)
## Iteration: 50 (-147853.6493, 0.1139)
## Group probs = (0.6446, 0.2895, 0.0659)
##
## Outer iteration: 22
## Iteration: 1 (-147730.6097, 0.6676)
## Iteration: 10 (-147708.6195, 0.1126)
## Iteration: 20 (-147684.8729, 0.1114)
## Iteration: 30 (-147661.5223, 0.1103)
## Iteration: 40 (-147638.5230, 0.1092)
## Iteration: 50 (-147615.8532, 0.1081)
## Group probs = (0.6428, 0.2910, 0.0662)
##
## Outer iteration: 23
## Iteration: 1 (-146996.6722, 0.3521)
## Iteration: 10 (-146976.0939, 0.1082)
## Iteration: 20 (-146953.7375, 0.1070)
## Iteration: 30 (-146931.7167, 0.1058)
## Iteration: 40 (-146909.9954, 0.1047)
## Iteration: 50 (-146888.5572, 0.1037)
## Group probs = (0.6398, 0.2931, 0.0671)
##
## Outer iteration: 24
## Iteration: 1 (-145652.5209, 0.5536)
## Iteration: 10 (-145633.1738, 0.1034)
## Iteration: 20 (-145612.3187, 0.1021)
## Iteration: 30 (-145591.8049, 0.1010)
## Iteration: 40 (-145571.5756, 0.0999)
## Iteration: 50 (-145551.6086, 0.0989)
## Group probs = (0.6374, 0.2955, 0.0671)
##
## Outer iteration: 25
## Iteration: 1 (-144848.2136, 0.7466)
## Iteration: 10 (-144829.9924, 0.0989)
## Iteration: 20 (-144810.2390, 0.0979)
## Iteration: 30 (-144790.7907, 0.0969)
## Iteration: 40 (-144771.6128, 0.0960)
## Iteration: 50 (-144752.6866, 0.0951)
## Group probs = (0.6364, 0.2957, 0.0679)
##
## Outer iteration: 26
## Iteration: 1 (-144261.0682, 1.1337)
```

```
## Iteration: 10 (-144242.8847, 0.0958)
## Iteration: 20 (-144223.8758, 0.0948)
## Iteration: 30 (-144205.2566, 0.0938)
## Iteration: 40 (-144186.9268, 0.0929)
## Iteration: 50 (-144168.8488, 0.0920)
## Group probs = (0.6351, 0.2964, 0.0685)
##
## Outer iteration: 27
## Iteration: 1 (-143632.9558, 1.0817)
## Iteration: 10 (-143615.5103, 0.0932)
## Iteration: 20 (-143597.0787, 0.0921)
## Iteration: 30 (-143579.0184, 0.0910)
## Iteration: 40 (-143561.2380, 0.0900)
## Iteration: 50 (-143543.7001, 0.0891)
## Group probs = (0.6338, 0.2970, 0.0692)
##
## Outer iteration: 28
## Iteration: 1 (-143088.7524, 0.4571)
## Iteration: 10 (-143073.2090, 0.0881)
## Iteration: 20 (-143056.4453, 0.0871)
## Iteration: 30 (-143039.9176, 0.0862)
## Iteration: 40 (-143023.5894, 0.0854)
## Iteration: 50 (-143007.4458, 0.0846)
## Group probs = (0.6360, 0.2950, 0.0690)
##
## Outer iteration: 29
## Iteration: 1 (-143757.3154, 0.4661)
## Iteration: 10 (-143741.8507, 0.0847)
## Iteration: 20 (-143725.2540, 0.0843)
## Iteration: 30 (-143708.9086, 0.0838)
## Iteration: 40 (-143692.7684, 0.0832)
## Iteration: 50 (-143676.8162, 0.0826)
## Group probs = (0.6349, 0.2954, 0.0697)
##
## Outer iteration: 30
## Iteration: 1 (-143260.9309, 0.3681)
## Iteration: 10 (-143246.2815, 0.0830)
## Iteration: 20 (-143230.4777, 0.0821)
## Iteration: 30 (-143214.9115, 0.0813)
## Iteration: 40 (-143199.5422, 0.0806)
## Iteration: 50 (-143184.3523, 0.0799)
## Group probs = (0.6293, 0.2998, 0.0709)
##
## Outer iteration: 31
## Iteration: 1 (-141080.6360, 0.6983)
## Iteration: 10 (-141066.7402, 0.0798)
## Iteration: 20 (-141052.0707, 0.0785)
## Iteration: 30 (-141037.6558, 0.0776)
## Iteration: 40 (-141023.4224, 0.0769)
## Iteration: 50 (-141009.3452, 0.0762)
## Group probs = (0.6331, 0.2964, 0.0705)
##
## Outer iteration: 32
## Iteration: 1 (-142355.5133, 0.5985)
```

```
## Iteration: 10 (-142342.4119, 0.0757)
## Iteration: 20 (-142328.2400, 0.0753)
## Iteration: 30 (-142314.2489, 0.0749)
## Iteration: 40 (-142300.4053, 0.0744)
## Iteration: 50 (-142286.6965, 0.0739)
## Group probs = (0.6323, 0.2965, 0.0712)
##
## Outer iteration: 33
## Iteration: 1 (-141880.4340, 1.1363)
## Iteration: 10 (-141866.8025, 0.0747)
## Iteration: 20 (-141852.8874, 0.0741)
## Iteration: 30 (-141839.2799, 0.0735)
## Iteration: 40 (-141825.8688, 0.0729)
## Iteration: 50 (-141812.6172, 0.0724)
## Group probs = (0.6316, 0.2977, 0.0707)
##
## Outer iteration: 34
## Iteration: 1 (-141702.4935, 0.9291)
## Iteration: 10 (-141690.0415, 0.0725)
## Iteration: 20 (-141676.6555, 0.0720)
## Iteration: 30 (-141663.4520, 0.0715)
## Iteration: 40 (-141650.3970, 0.0710)
## Iteration: 50 (-141637.4771, 0.0705)
## Group probs = (0.6270, 0.3017, 0.0713)
##
## Outer iteration: 35
## Iteration: 1 (-140121.4206, 0.5036)
## Iteration: 10 (-140109.6986, 0.0698)
## Iteration: 20 (-140097.1481, 0.0689)
## Iteration: 30 (-140084.7806, 0.0684)
## Iteration: 40 (-140072.5537, 0.0679)
## Iteration: 50 (-140060.4509, 0.0674)
## Group probs = (0.6281, 0.2999, 0.0720)
##
## Outer iteration: 36
## Iteration: 1 (-140250.2868, 1.2317)
## Iteration: 10 (-140238.1651, 0.0678)
## Iteration: 20 (-140225.7508, 0.0673)
## Iteration: 30 (-140213.6164, 0.0668)
## Iteration: 40 (-140201.6552, 0.0663)
## Iteration: 50 (-140189.8313, 0.0659)
## Group probs = (0.6292, 0.2985, 0.0723)
##
## Outer iteration: 37
## Iteration: 1 (-140465.3630, 0.4712)
## Iteration: 10 (-140454.4309, 0.0658)
## Iteration: 20 (-140442.6671, 0.0654)
## Iteration: 30 (-140431.0577, 0.0649)
## Iteration: 40 (-140419.5660, 0.0645)
## Iteration: 50 (-140408.1783, 0.0641)
## Group probs = (0.6263, 0.3014, 0.0723)
##
## Outer iteration: 38
## Iteration: 1 (-139430.1816, 0.4631)
```

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## Iteration: 10 (-139419.2281, 0.0647)
## Iteration: 20 (-139407.7791, 0.0641)
## Iteration: 30 (-139396.5613, 0.0635)
## Iteration: 40 (-139385.5000, 0.0630)
## Iteration: 50 (-139374.5647, 0.0625)
## Group probs = (0.6232, 0.3048, 0.0720)
##
## Outer iteration: 39
## Iteration: 1 (-138550.5844, 1.2578)
## Iteration: 10 (-138540.2078, 0.0627)
## Iteration: 20 (-138529.2525, 0.0621)
## Iteration: 30 (-138518.4455, 0.0615)
## Iteration: 40 (-138507.7507, 0.0611)
## Iteration: 50 (-138497.1550, 0.0607)
## Group probs = (0.6218, 0.3053, 0.0729)
##
## Outer iteration: 40
## Iteration: 1 (-137817.6138, 0.9474)
## Iteration: 10 (-137806.9598, 0.0618)
## Iteration: 20 (-137796.0016, 0.0613)
## Iteration: 30 (-137785.2855, 0.0607)
## Iteration: 40 (-137774.7285, 0.0602)
## Iteration: 50 (-137764.3002, 0.0598)
## Group probs = (0.6214, 0.3055, 0.0731)
##
## Outer iteration: 1
## Iteration: 1 (-189719.2026,   Inf)
## Iteration: 10 (-156044.6181, 8.4937)
## Iteration: 20 (-151042.3745, 4.3221)
## Iteration: 30 (-148696.7982, 2.9029)
## Iteration: 40 (-147263.6689, 2.1828)
## Iteration: 50 (-146251.9928, 1.7613)
## Group probs = (0.6480, 0.2882, 0.0638)
##
## Outer iteration: 2
## Iteration: 1 (-158949.7699, 2.0282)
## Iteration: 10 (-158415.5325, 1.3096)
## Iteration: 20 (-157974.0493, 1.1267)
## Iteration: 30 (-157611.5974, 0.9981)
## Iteration: 40 (-157303.3290, 0.8999)
## Iteration: 50 (-157035.2244, 0.8215)
## Group probs = (0.6606, 0.2788, 0.0607)
##
## Outer iteration: 3
## Iteration: 1 (-161576.1833, 1.0689)
## Iteration: 10 (-161346.1924, 0.7691)
## Iteration: 20 (-161120.3870, 0.7156)
## Iteration: 30 (-160917.2254, 0.6690)
## Iteration: 40 (-160732.5736, 0.6282)
## Iteration: 50 (-160563.4730, 0.5923)
## Group probs = (0.6694, 0.2719, 0.0587)
##
## Outer iteration: 4
## Iteration: 1 (-163811.3594, 0.6724)

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## Iteration: 10 (-163658.7140, 0.5705)
## Iteration: 20 (-163502.7728, 0.5432)
## Iteration: 30 (-163358.2362, 0.5174)
## Iteration: 40 (-163223.5201, 0.4937)
## Iteration: 50 (-163097.4148, 0.4719)
## Group probs = (0.6709, 0.2719, 0.0572)
##
## Outer iteration: 5
## Iteration: 1 (-163629.5703, 0.9800)
## Iteration: 10 (-163512.7594, 0.4600)
## Iteration: 20 (-163391.6797, 0.4429)
## Iteration: 30 (-163277.8063, 0.4260)
## Iteration: 40 (-163170.2469, 0.4101)
## Iteration: 50 (-163068.3267, 0.3951)
## Group probs = (0.6751, 0.2683, 0.0566)
##
## Outer iteration: 6
## Iteration: 1 (-164472.6632, 0.6515)
## Iteration: 10 (-164376.4523, 0.3898)
## Iteration: 20 (-164275.8183, 0.3773)
## Iteration: 30 (-164180.2554, 0.3649)
## Iteration: 40 (-164089.1591, 0.3531)
## Iteration: 50 (-164002.0937, 0.3420)
## Group probs = (0.6754, 0.2683, 0.0563)
##
## Outer iteration: 7
## Iteration: 1 (-163972.4612, 0.8148)
## Iteration: 10 (-163890.5040, 0.3387)
## Iteration: 20 (-163804.3021, 0.3290)
## Iteration: 30 (-163721.9668, 0.3193)
## Iteration: 40 (-163643.0223, 0.3101)
## Iteration: 50 (-163567.1443, 0.3014)
## Group probs = (0.6741, 0.2690, 0.0570)
##
## Outer iteration: 8
## Iteration: 1 (-162731.9919, 0.7651)
## Iteration: 10 (-162660.6454, 0.2999)
## Iteration: 20 (-162585.3857, 0.2918)
## Iteration: 30 (-162513.1490, 0.2839)
## Iteration: 40 (-162443.5531, 0.2764)
## Iteration: 50 (-162376.3507, 0.2694)
## Group probs = (0.6698, 0.2732, 0.0570)
##
## Outer iteration: 9
## Iteration: 1 (-160671.1596, 0.6312)
## Iteration: 10 (-160609.0140, 0.2690)
## Iteration: 20 (-160542.8354, 0.2622)
## Iteration: 30 (-160478.9477, 0.2556)
## Iteration: 40 (-160417.1007, 0.2495)
## Iteration: 50 (-160357.1286, 0.2438)
## Group probs = (0.6674, 0.2755, 0.0571)
##
## Outer iteration: 10
## Iteration: 1 (-159409.3280, 0.7543)
```

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## Iteration: 10 (-159352.2025, 0.2452)
## Iteration: 20 (-159291.6250, 0.2396)
## Iteration: 30 (-159233.0948, 0.2341)
## Iteration: 40 (-159176.3420, 0.2289)
## Iteration: 50 (-159121.2081, 0.2240)
## Group probs = (0.6686, 0.2747, 0.0568)
##
## Outer iteration: 11
## Iteration: 1 (-159507.0228, 0.8522)
## Iteration: 10 (-159455.4972, 0.2239)
## Iteration: 20 (-159400.2379, 0.2197)
## Iteration: 30 (-159346.5951, 0.2153)
## Iteration: 40 (-159294.4079, 0.2111)
## Iteration: 50 (-159243.5698, 0.2070)
## Group probs = (0.6671, 0.2756, 0.0573)
##
## Outer iteration: 12
## Iteration: 1 (-158554.4960, 0.4449)
## Iteration: 10 (-158508.6187, 0.2058)
## Iteration: 20 (-158459.0806, 0.2019)
## Iteration: 30 (-158410.8089, 0.1982)
## Iteration: 40 (-158363.7093, 0.1945)
## Iteration: 50 (-158317.7127, 0.1911)
## Group probs = (0.6644, 0.2777, 0.0579)
##
## Outer iteration: 13
## Iteration: 1 (-157202.8281, 0.3092)
## Iteration: 10 (-157160.0486, 0.1919)
## Iteration: 20 (-157114.2241, 0.1880)
## Iteration: 30 (-157069.6066, 0.1845)
## Iteration: 40 (-157026.0457, 0.1812)
## Iteration: 50 (-156983.4590, 0.1782)
## Group probs = (0.6596, 0.2817, 0.0587)
##
## Outer iteration: 14
## Iteration: 1 (-154991.7192, 0.4858)
## Iteration: 10 (-154953.9432, 0.1768)
## Iteration: 20 (-154913.2014, 0.1735)
## Iteration: 30 (-154873.3648, 0.1706)
## Iteration: 40 (-154834.3530, 0.1680)
## Iteration: 50 (-154796.1209, 0.1654)
## Group probs = (0.6573, 0.2835, 0.0592)
##
## Outer iteration: 15
## Iteration: 1 (-153844.0881, 0.9238)
## Iteration: 10 (-153808.5032, 0.1664)
## Iteration: 20 (-153770.2871, 0.1637)
## Iteration: 30 (-153732.9649, 0.1610)
## Iteration: 40 (-153696.4316, 0.1585)
## Iteration: 50 (-153660.6283, 0.1561)
## Group probs = (0.6580, 0.2826, 0.0594)
##
## Outer iteration: 16
## Iteration: 1 (-153865.1746, 0.5332)
```

```
## Iteration: 10 (-153831.8684, 0.1569)
## Iteration: 20 (-153796.0788, 0.1546)
## Iteration: 30 (-153761.1312, 0.1523)
## Iteration: 40 (-153726.9192, 0.1500)
## Iteration: 50 (-153693.3819, 0.1478)
## Group probs = (0.6540, 0.2862, 0.0599)
##
## Outer iteration: 17
## Iteration: 1 (-152130.1389, 0.4054)
## Iteration: 10 (-152099.8173, 0.1477)
## Iteration: 20 (-152066.9682, 0.1455)
## Iteration: 30 (-152034.7963, 0.1433)
## Iteration: 40 (-152003.2392, 0.1412)
## Iteration: 50 (-151972.2558, 0.1393)
## Group probs = (0.6547, 0.2852, 0.0601)
##
## Outer iteration: 18
## Iteration: 1 (-152058.2812, 0.8649)
## Iteration: 10 (-152029.5970, 0.1391)
## Iteration: 20 (-151998.6509, 0.1373)
## Iteration: 30 (-151968.2769, 0.1355)
## Iteration: 40 (-151938.4191, 0.1339)
## Iteration: 50 (-151909.0500, 0.1323)
## Group probs = (0.6522, 0.2872, 0.0606)
##
## Outer iteration: 19
## Iteration: 1 (-150884.5541, 0.2399)
## Iteration: 10 (-150858.6980, 0.1311)
## Iteration: 20 (-150830.6154, 0.1293)
## Iteration: 30 (-150803.0055, 0.1276)
## Iteration: 40 (-150775.8277, 0.1261)
## Iteration: 50 (-150749.0610, 0.1247)
## Group probs = (0.6508, 0.2888, 0.0604)
##
## Outer iteration: 20
## Iteration: 1 (-150373.9646, 0.8938)
## Iteration: 10 (-150349.4509, 0.1246)
## Iteration: 20 (-150322.9476, 0.1233)
## Iteration: 30 (-150296.9052, 0.1218)
## Iteration: 40 (-150271.2765, 0.1204)
## Iteration: 50 (-150246.0370, 0.1191)
## Group probs = (0.6456, 0.2928, 0.0616)
##
## Outer iteration: 21
## Iteration: 1 (-148145.9501, 1.0281)
## Iteration: 10 (-148122.6575, 0.1188)
## Iteration: 20 (-148098.1529, 0.1169)
## Iteration: 30 (-148074.1796, 0.1153)
## Iteration: 40 (-148050.6058, 0.1139)
## Iteration: 50 (-148027.3858, 0.1126)
## Group probs = (0.6468, 0.2918, 0.0613)
##
## Outer iteration: 22
## Iteration: 1 (-148430.2195, 0.5921)
```

```
## Iteration: 10 (-148408.7994, 0.1122)
## Iteration: 20 (-148385.7472, 0.1110)
## Iteration: 30 (-148363.0494, 0.1099)
## Iteration: 40 (-148340.6638, 0.1089)
## Iteration: 50 (-148318.5740, 0.1078)
## Group probs = (0.6425, 0.2954, 0.0620)
##
## Outer iteration: 23
## Iteration: 1 (-146751.4111, 0.7630)
## Iteration: 10 (-146731.0034, 0.1088)
## Iteration: 20 (-146709.2150, 0.1071)
## Iteration: 30 (-146687.8159, 0.1057)
## Iteration: 40 (-146666.7291, 0.1045)
## Iteration: 50 (-146645.9246, 0.1034)
## Group probs = (0.6382, 0.2999, 0.0618)
##
## Outer iteration: 24
## Iteration: 1 (-145239.1220, 0.8203)
## Iteration: 10 (-145220.2656, 0.1028)
## Iteration: 20 (-145200.0627, 0.1014)
## Iteration: 30 (-145180.1893, 0.1003)
## Iteration: 40 (-145160.5918, 0.0993)
## Iteration: 50 (-145141.2480, 0.0983)
## Group probs = (0.6391, 0.2986, 0.0623)
##
## Outer iteration: 25
## Iteration: 1 (-145278.8135, 0.6378)
## Iteration: 10 (-145259.8127, 0.1002)
## Iteration: 20 (-145239.7024, 0.0993)
## Iteration: 30 (-145220.0107, 0.0982)
## Iteration: 40 (-145200.6455, 0.0971)
## Iteration: 50 (-145181.5660, 0.0961)
## Group probs = (0.6407, 0.2970, 0.0623)
##
## Outer iteration: 26
## Iteration: 1 (-145809.4615, 0.8752)
## Iteration: 10 (-145792.1178, 0.0950)
## Iteration: 20 (-145773.4797, 0.0940)
## Iteration: 30 (-145755.1086, 0.0931)
## Iteration: 40 (-145736.9649, 0.0923)
## Iteration: 50 (-145719.0328, 0.0916)
## Group probs = (0.6401, 0.2973, 0.0626)
##
## Outer iteration: 27
## Iteration: 1 (-145366.8387, 0.3813)
## Iteration: 10 (-145350.2826, 0.0913)
## Iteration: 20 (-145332.5198, 0.0905)
## Iteration: 30 (-145315.0353, 0.0897)
## Iteration: 40 (-145297.7785, 0.0889)
## Iteration: 50 (-145280.7289, 0.0882)
## Group probs = (0.6431, 0.2945, 0.0623)
##
## Outer iteration: 28
## Iteration: 1 (-146329.3354, 0.3837)
```

```
## Iteration: 10 (-146313.2631, 0.0880)
## Iteration: 20 (-146296.0223, 0.0875)
## Iteration: 30 (-146279.0112, 0.0869)
## Iteration: 40 (-146262.1925, 0.0862)
## Iteration: 50 (-146245.5546, 0.0856)
## Group probs = (0.6423, 0.2947, 0.0630)
##
## Outer iteration: 29
## Iteration: 1 (-145905.3952, 0.6800)
## Iteration: 10 (-145890.3575, 0.0850)
## Iteration: 20 (-145874.2196, 0.0843)
## Iteration: 30 (-145858.3126, 0.0835)
## Iteration: 40 (-145842.5919, 0.0828)
## Iteration: 50 (-145827.0411, 0.0822)
## Group probs = (0.6449, 0.2925, 0.0626)
##
## Outer iteration: 30
## Iteration: 1 (-146742.3199, 0.7854)
## Iteration: 10 (-146727.4089, 0.0819)
## Iteration: 20 (-146711.7227, 0.0812)
## Iteration: 30 (-146696.3000, 0.0806)
## Iteration: 40 (-146681.0686, 0.0801)
## Iteration: 50 (-146666.0026, 0.0796)
## Group probs = (0.6449, 0.2925, 0.0626)
##
## Outer iteration: 31
## Iteration: 1 (-146664.4914, 0.6003)
## Iteration: 10 (-146650.7402, 0.0789)
## Iteration: 20 (-146635.7730, 0.0785)
## Iteration: 30 (-146620.9688, 0.0780)
## Iteration: 40 (-146606.3128, 0.0775)
## Iteration: 50 (-146591.7982, 0.0770)
## Group probs = (0.6413, 0.2960, 0.0627)
##
## Outer iteration: 32
## Iteration: 1 (-145442.1905, 0.8227)
## Iteration: 10 (-145428.5673, 0.0773)
## Iteration: 20 (-145414.2941, 0.0762)
## Iteration: 30 (-145400.2651, 0.0754)
## Iteration: 40 (-145386.4110, 0.0748)
## Iteration: 50 (-145372.7055, 0.0742)
## Group probs = (0.6394, 0.2977, 0.0629)
##
## Outer iteration: 33
## Iteration: 1 (-144530.0018, 0.8568)
## Iteration: 10 (-144517.2624, 0.0746)
## Iteration: 20 (-144503.5866, 0.0739)
## Iteration: 30 (-144490.0897, 0.0734)
## Iteration: 40 (-144476.7345, 0.0728)
## Iteration: 50 (-144463.5074, 0.0723)
## Group probs = (0.6387, 0.2976, 0.0636)
##
## Outer iteration: 34
## Iteration: 1 (-144031.8359, 1.2621)
```

```
## Iteration: 10 (-144019.1388, 0.0720)
## Iteration: 20 (-144005.9670, 0.0713)
## Iteration: 30 (-143993.0397, 0.0707)
## Iteration: 40 (-143980.2697, 0.0702)
## Iteration: 50 (-143967.6302, 0.0697)
## Group probs = (0.6363, 0.2997, 0.0641)
##
## Outer iteration: 35
## Iteration: 1 (-143023.7561, 0.4202)
## Iteration: 10 (-143011.9293, 0.0704)
## Iteration: 20 (-142999.3442, 0.0697)
## Iteration: 30 (-142986.9947, 0.0690)
## Iteration: 40 (-142974.8089, 0.0684)
## Iteration: 50 (-142962.7574, 0.0679)
## Group probs = (0.6371, 0.2995, 0.0633)
##
## Outer iteration: 36
## Iteration: 1 (-143401.5312, 0.5453)
## Iteration: 10 (-143390.2062, 0.0677)
## Iteration: 20 (-143378.0369, 0.0673)
## Iteration: 30 (-143366.0216, 0.0669)
## Iteration: 40 (-143354.1255, 0.0665)
## Iteration: 50 (-143342.3362, 0.0661)
## Group probs = (0.6385, 0.2983, 0.0632)
##
## Outer iteration: 37
## Iteration: 1 (-143847.9523, 0.5229)
## Iteration: 10 (-143836.9551, 0.0655)
## Iteration: 20 (-143825.3163, 0.0650)
## Iteration: 30 (-143813.8473, 0.0646)
## Iteration: 40 (-143802.4915, 0.0642)
## Iteration: 50 (-143791.2325, 0.0638)
## Group probs = (0.6396, 0.2978, 0.0626)
##
## Outer iteration: 38
## Iteration: 1 (-144309.4773, 0.9707)
## Iteration: 10 (-144298.4550, 0.0644)
## Iteration: 20 (-144286.8457, 0.0639)
## Iteration: 30 (-144275.4099, 0.0635)
## Iteration: 40 (-144264.0985, 0.0631)
## Iteration: 50 (-144252.8950, 0.0627)
## Group probs = (0.6388, 0.2985, 0.0627)
##
## Outer iteration: 39
## Iteration: 1 (-143880.9255, 0.6025)
## Iteration: 10 (-143870.9105, 0.0620)
## Iteration: 20 (-143860.0269, 0.0617)
## Iteration: 30 (-143849.2548, 0.0614)
## Iteration: 40 (-143838.5723, 0.0611)
## Iteration: 50 (-143827.9720, 0.0608)
## Group probs = (0.6378, 0.2995, 0.0627)
##
## Outer iteration: 40
## Iteration: 1 (-143553.0847, 0.4485)
```

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## Iteration: 10 (-143543.3358, 0.0609)
## Iteration: 20 (-143532.7899, 0.0603)
## Iteration: 30 (-143522.3576, 0.0599)
## Iteration: 40 (-143512.0162, 0.0595)
## Iteration: 50 (-143501.7578, 0.0592)
## Group probs = (0.6368, 0.2999, 0.0633)
##
## Outer iteration: 1
## Iteration: 1 (-189247.9805, Inf)
## Iteration: 10 (-155634.6544, 8.4401)
## Iteration: 20 (-150709.7556, 4.2940)
## Iteration: 30 (-148352.2493, 2.9177)
## Iteration: 40 (-146906.2337, 2.1965)
## Iteration: 50 (-145888.6573, 1.7701)
## Group probs = (0.6529, 0.2830, 0.0640)
##
## Outer iteration: 2
## Iteration: 1 (-160847.9693, 1.7187)
## Iteration: 10 (-160306.2559, 1.3164)
## Iteration: 20 (-159863.0259, 1.1320)
## Iteration: 30 (-159499.3797, 1.0030)
## Iteration: 40 (-159190.1753, 0.9044)
## Iteration: 50 (-158921.3452, 0.8256)
## Group probs = (0.6678, 0.2715, 0.0607)
##
## Outer iteration: 3
## Iteration: 1 (-164543.1600, 1.0682)
## Iteration: 10 (-164312.7217, 0.7684)
## Iteration: 20 (-164087.5677, 0.7152)
## Iteration: 30 (-163885.1115, 0.6689)
## Iteration: 40 (-163701.1225, 0.6283)
## Iteration: 50 (-163532.6337, 0.5925)
## Group probs = (0.6738, 0.2665, 0.0597)
##
## Outer iteration: 4
## Iteration: 1 (-165489.6923, 0.8620)
## Iteration: 10 (-165336.4399, 0.5713)
## Iteration: 20 (-165180.0349, 0.5436)
## Iteration: 30 (-165035.1514, 0.5175)
## Iteration: 40 (-164900.1636, 0.4937)
## Iteration: 50 (-164773.8348, 0.4720)
## Group probs = (0.6751, 0.2661, 0.0587)
##
## Outer iteration: 5
## Iteration: 1 (-165275.4521, 0.6990)
## Iteration: 10 (-165159.6844, 0.4606)
## Iteration: 20 (-165039.4477, 0.4430)
## Iteration: 30 (-164926.2789, 0.4259)
## Iteration: 40 (-164819.3243, 0.4099)
## Iteration: 50 (-164717.9287, 0.3950)
## Group probs = (0.6745, 0.2672, 0.0583)
##
## Outer iteration: 6
## Iteration: 1 (-164322.2945, 1.3580)

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## Iteration: 10 (-164226.4816, 0.3894)
## Iteration: 20 (-164126.6531, 0.3766)
## Iteration: 30 (-164031.9502, 0.3640)
## Iteration: 40 (-163941.7174, 0.3521)
## Iteration: 50 (-163855.5011, 0.3410)
## Group probs = (0.6762, 0.2659, 0.0580)
##
## Outer iteration: 7
## Iteration: 1 (-164410.5574, 0.6321)
## Iteration: 10 (-164328.7557, 0.3379)
## Iteration: 20 (-164242.7590, 0.3284)
## Iteration: 30 (-164160.6375, 0.3188)
## Iteration: 40 (-164081.9138, 0.3097)
## Iteration: 50 (-164006.2617, 0.3011)
## Group probs = (0.6735, 0.2675, 0.0590)
##
## Outer iteration: 8
## Iteration: 1 (-162741.2594, 0.8706)
## Iteration: 10 (-162670.6491, 0.2998)
## Iteration: 20 (-162596.0646, 0.2916)
## Iteration: 30 (-162524.4145, 0.2837)
## Iteration: 40 (-162455.3451, 0.2763)
## Iteration: 50 (-162388.6268, 0.2694)
## Group probs = (0.6702, 0.2703, 0.0596)
##
## Outer iteration: 9
## Iteration: 1 (-160951.2016, 1.1015)
## Iteration: 10 (-160886.9948, 0.2714)
## Iteration: 20 (-160819.5232, 0.2641)
## Iteration: 30 (-160754.6781, 0.2572)
## Iteration: 40 (-160692.0637, 0.2508)
## Iteration: 50 (-160631.4532, 0.2449)
## Group probs = (0.6695, 0.2696, 0.0609)
##
## Outer iteration: 10
## Iteration: 1 (-159996.0378, 1.5226)
## Iteration: 10 (-159938.4890, 0.2458)
## Iteration: 20 (-159878.1631, 0.2395)
## Iteration: 30 (-159819.9763, 0.2338)
## Iteration: 40 (-159763.5983, 0.2285)
## Iteration: 50 (-159708.8491, 0.2237)
## Group probs = (0.6660, 0.2723, 0.0616)
##
## Outer iteration: 11
## Iteration: 1 (-158181.1495, 0.8592)
## Iteration: 10 (-158129.6514, 0.2249)
## Iteration: 20 (-158074.8250, 0.2199)
## Iteration: 30 (-158021.6833, 0.2151)
## Iteration: 40 (-157970.0229, 0.2107)
## Iteration: 50 (-157919.7208, 0.2066)
## Group probs = (0.6634, 0.2746, 0.0620)
##
## Outer iteration: 12
## Iteration: 1 (-156785.1250, 0.8077)

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## Iteration: 10 (-156738.8871, 0.2061)
## Iteration: 20 (-156689.5962, 0.2016)
## Iteration: 30 (-156641.6432, 0.1977)
## Iteration: 40 (-156594.8684, 0.1941)
## Iteration: 50 (-156549.1876, 0.1907)
## Group probs = (0.6572, 0.2803, 0.0625)
##
## Outer iteration: 13
## Iteration: 1 (-154184.2006, 0.7589)
## Iteration: 10 (-154142.8013, 0.1909)
## Iteration: 20 (-154098.5040, 0.1869)
## Iteration: 30 (-154055.3813, 0.1833)
## Iteration: 40 (-154013.2732, 0.1800)
## Iteration: 50 (-153972.0957, 0.1770)
## Group probs = (0.6560, 0.2811, 0.0629)
##
## Outer iteration: 14
## Iteration: 1 (-153388.3013, 0.3003)
## Iteration: 10 (-153350.3106, 0.1776)
## Iteration: 20 (-153309.3370, 0.1746)
## Iteration: 30 (-153269.3041, 0.1717)
## Iteration: 40 (-153230.1276, 0.1689)
## Iteration: 50 (-153191.7554, 0.1663)
## Group probs = (0.6607, 0.2775, 0.0618)
##
## Outer iteration: 15
## Iteration: 1 (-155076.8272, 0.5390)
## Iteration: 10 (-155041.4153, 0.1637)
## Iteration: 20 (-155003.2307, 0.1619)
## Iteration: 30 (-154965.8542, 0.1599)
## Iteration: 40 (-154929.2087, 0.1578)
## Iteration: 50 (-154893.2551, 0.1558)
## Group probs = (0.6585, 0.2788, 0.0627)
##
## Outer iteration: 16
## Iteration: 1 (-153872.0451, 0.7120)
## Iteration: 10 (-153839.1963, 0.1556)
## Iteration: 20 (-153803.9053, 0.1533)
## Iteration: 30 (-153769.3416, 0.1511)
## Iteration: 40 (-153735.4266, 0.1491)
## Iteration: 50 (-153702.1235, 0.1471)
## Group probs = (0.6557, 0.2820, 0.0624)
##
## Outer iteration: 17
## Iteration: 1 (-152753.6978, 0.7999)
## Iteration: 10 (-152723.4093, 0.1465)
## Iteration: 20 (-152690.5250, 0.1445)
## Iteration: 30 (-152658.2446, 0.1426)
## Iteration: 40 (-152626.5254, 0.1408)
## Iteration: 50 (-152595.3423, 0.1391)
## Group probs = (0.6537, 0.2829, 0.0634)
##
## Outer iteration: 18
## Iteration: 1 (-151629.7691, 0.5518)
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## Iteration: 10 (-151601.3776, 0.1391)
## Iteration: 20 (-151570.8451, 0.1371)
## Iteration: 30 (-151540.8861, 0.1352)
## Iteration: 40 (-151511.4340, 0.1335)
## Iteration: 50 (-151482.4589, 0.1319)
## Group probs = (0.6522, 0.2850, 0.0628)
##
## Outer iteration: 19
## Iteration: 1 (-151118.0683, 1.0645)
## Iteration: 10 (-151091.5382, 0.1315)
## Iteration: 20 (-151062.9914, 0.1302)
## Iteration: 30 (-151034.9834, 0.1286)
## Iteration: 40 (-151007.4447, 0.1271)
## Iteration: 50 (-150980.3433, 0.1256)
## Group probs = (0.6542, 0.2828, 0.0630)
##
## Outer iteration: 20
## Iteration: 1 (-151664.3706, 0.3998)
## Iteration: 10 (-151638.8930, 0.1256)
## Iteration: 20 (-151611.3704, 0.1245)
## Iteration: 30 (-151584.3444, 0.1231)
## Iteration: 40 (-151557.7643, 0.1217)
## Iteration: 50 (-151531.6031, 0.1204)
## Group probs = (0.6568, 0.2800, 0.0632)
##
## Outer iteration: 21
## Iteration: 1 (-152374.5557, 0.7171)
## Iteration: 10 (-152350.9147, 0.1195)
## Iteration: 20 (-152325.1962, 0.1184)
## Iteration: 30 (-152299.8776, 0.1172)
## Iteration: 40 (-152274.9312, 0.1160)
## Iteration: 50 (-152250.3405, 0.1148)
## Group probs = (0.6560, 0.2801, 0.0639)
##
## Outer iteration: 22
## Iteration: 1 (-151827.9783, 0.7296)
## Iteration: 10 (-151805.9967, 0.1136)
## Iteration: 20 (-151782.2432, 0.1122)
## Iteration: 30 (-151758.8631, 0.1110)
## Iteration: 40 (-151735.8103, 0.1099)
## Iteration: 50 (-151713.0656, 0.1088)
## Group probs = (0.6531, 0.2823, 0.0646)
##
## Outer iteration: 23
## Iteration: 1 (-150458.4721, 0.2905)
## Iteration: 10 (-150437.9928, 0.1083)
## Iteration: 20 (-150415.7799, 0.1070)
## Iteration: 30 (-150393.8954, 0.1059)
## Iteration: 40 (-150372.3019, 0.1049)
## Iteration: 50 (-150350.9835, 0.1039)
## Group probs = (0.6496, 0.2854, 0.0650)
##
## Outer iteration: 24
## Iteration: 1 (-149179.4920, 1.0025)
```

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## Iteration: 10 (-149159.2119, 0.1057)
## Iteration: 20 (-149137.6593, 0.1044)
## Iteration: 30 (-149116.5527, 0.1030)
## Iteration: 40 (-149095.7935, 0.1018)
## Iteration: 50 (-149075.3383, 0.1007)
## Group probs = (0.6493, 0.2858, 0.0649)
##
## Outer iteration: 25
## Iteration: 1 (-148936.6134, 0.1522)
## Iteration: 10 (-148917.8906, 0.1009)
## Iteration: 20 (-148897.5600, 0.0999)
## Iteration: 30 (-148877.5445, 0.0988)
## Iteration: 40 (-148857.8081, 0.0978)
## Iteration: 50 (-148838.3311, 0.0969)
## Group probs = (0.6487, 0.2861, 0.0652)
##
## Outer iteration: 26
## Iteration: 1 (-148493.5176, 0.3050)
## Iteration: 10 (-148476.0830, 0.0961)
## Iteration: 20 (-148457.0507, 0.0951)
## Iteration: 30 (-148438.2617, 0.0942)
## Iteration: 40 (-148419.6981, 0.0934)
## Iteration: 50 (-148401.3503, 0.0926)
## Group probs = (0.6488, 0.2860, 0.0651)
##
## Outer iteration: 27
## Iteration: 1 (-148399.2716, 0.4157)
## Iteration: 10 (-148382.9066, 0.0920)
## Iteration: 20 (-148364.9812, 0.0912)
## Iteration: 30 (-148347.2664, 0.0904)
## Iteration: 40 (-148329.7501, 0.0897)
## Iteration: 50 (-148312.4253, 0.0889)
## Group probs = (0.6481, 0.2861, 0.0658)
##
## Outer iteration: 28
## Iteration: 1 (-147963.5563, 0.5161)
## Iteration: 10 (-147947.6856, 0.0886)
## Iteration: 20 (-147930.5432, 0.0877)
## Iteration: 30 (-147913.6458, 0.0869)
## Iteration: 40 (-147896.9525, 0.0862)
## Iteration: 50 (-147880.4466, 0.0855)
## Group probs = (0.6470, 0.2870, 0.0659)
##
## Outer iteration: 29
## Iteration: 1 (-147474.9140, 1.0747)
## Iteration: 10 (-147459.0773, 0.0862)
## Iteration: 20 (-147442.2975, 0.0856)
## Iteration: 30 (-147425.8144, 0.0848)
## Iteration: 40 (-147409.5588, 0.0841)
## Iteration: 50 (-147393.5040, 0.0833)
## Group probs = (0.6431, 0.2905, 0.0665)
##
## Outer iteration: 30
## Iteration: 1 (-145929.0577, 0.9810)
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## Iteration: 10 (-145913.9985, 0.0838)
## Iteration: 20 (-145898.0661, 0.0828)
## Iteration: 30 (-145882.4474, 0.0819)
## Iteration: 40 (-145867.0627, 0.0811)
## Iteration: 50 (-145851.8769, 0.0804)
## Group probs = (0.6421, 0.2913, 0.0666)
##
## Outer iteration: 31
## Iteration: 1 (-145471.2305, 0.7080)
## Iteration: 10 (-145457.4672, 0.0795)
## Iteration: 20 (-145442.6491, 0.0786)
## Iteration: 30 (-145428.0241, 0.0780)
## Iteration: 40 (-145413.5572, 0.0774)
## Iteration: 50 (-145399.2355, 0.0769)
## Group probs = (0.6426, 0.2914, 0.0661)
##
## Outer iteration: 32
## Iteration: 1 (-145682.1861, 0.9131)
## Iteration: 10 (-145668.7097, 0.0773)
## Iteration: 20 (-145654.2956, 0.0767)
## Iteration: 30 (-145640.1031, 0.0762)
## Iteration: 40 (-145626.0784, 0.0756)
## Iteration: 50 (-145612.2030, 0.0750)
## Group probs = (0.6412, 0.2926, 0.0662)
##
## Outer iteration: 33
## Iteration: 1 (-145118.3190, 0.6918)
## Iteration: 10 (-145105.4142, 0.0749)
## Iteration: 20 (-145091.6167, 0.0741)
## Iteration: 30 (-145078.0288, 0.0735)
## Iteration: 40 (-145064.5977, 0.0729)
## Iteration: 50 (-145051.3038, 0.0724)
## Group probs = (0.6395, 0.2941, 0.0664)
##
## Outer iteration: 34
## Iteration: 1 (-144498.0941, 1.0604)
## Iteration: 10 (-144485.6305, 0.0729)
## Iteration: 20 (-144472.2051, 0.0723)
## Iteration: 30 (-144458.9555, 0.0717)
## Iteration: 40 (-144445.8517, 0.0712)
## Iteration: 50 (-144432.8809, 0.0707)
## Group probs = (0.6382, 0.2943, 0.0675)
##
## Outer iteration: 35
## Iteration: 1 (-143802.6536, 0.9066)
## Iteration: 10 (-143790.4132, 0.0707)
## Iteration: 20 (-143777.5151, 0.0699)
## Iteration: 30 (-143764.8686, 0.0693)
## Iteration: 40 (-143752.3923, 0.0688)
## Iteration: 50 (-143740.0557, 0.0683)
## Group probs = (0.6399, 0.2929, 0.0673)
##
## Outer iteration: 36
## Iteration: 1 (-144480.1534, 0.4545)

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## Iteration: 10 (-144468.8348, 0.0678)
## Iteration: 20 (-144456.5371, 0.0675)
## Iteration: 30 (-144444.3812, 0.0671)
## Iteration: 40 (-144432.3454, 0.0667)
## Iteration: 50 (-144420.4206, 0.0664)
## Group probs = (0.6436, 0.2894, 0.0670)
##
## Outer iteration: 37
## Iteration: 1 (-145633.2985, 0.3441)
## Iteration: 10 (-145622.1880, 0.0660)
## Iteration: 20 (-145610.1319, 0.0659)
## Iteration: 30 (-145598.2128, 0.0656)
## Iteration: 40 (-145586.4088, 0.0652)
## Iteration: 50 (-145574.7111, 0.0649)
## Group probs = (0.6400, 0.2926, 0.0674)
##
## Outer iteration: 38
## Iteration: 1 (-144321.5860, 0.8477)
## Iteration: 10 (-144310.6660, 0.0651)
## Iteration: 20 (-144299.0680, 0.0645)
## Iteration: 30 (-144287.6434, 0.0640)
## Iteration: 40 (-144276.3494, 0.0636)
## Iteration: 50 (-144265.1681, 0.0631)
## Group probs = (0.6386, 0.2935, 0.0680)
##
## Outer iteration: 39
## Iteration: 1 (-143757.2029, 0.4871)
## Iteration: 10 (-143746.9153, 0.0627)
## Iteration: 20 (-143735.8723, 0.0623)
## Iteration: 30 (-143724.9547, 0.0619)
## Iteration: 40 (-143714.1336, 0.0616)
## Iteration: 50 (-143703.3990, 0.0612)
## Group probs = (0.6373, 0.2949, 0.0677)
##
## Outer iteration: 40
## Iteration: 1 (-143427.4964, 1.0599)
## Iteration: 10 (-143417.2222, 0.0612)
## Iteration: 20 (-143406.3383, 0.0608)
## Iteration: 30 (-143395.6319, 0.0604)
## Iteration: 40 (-143385.0534, 0.0600)
## Iteration: 50 (-143374.5836, 0.0597)
## Group probs = (0.6362, 0.2955, 0.0682)
##
## Outer iteration: 1
## Iteration: 1 (-189826.5774, Inf)
## Iteration: 10 (-156232.6704, 8.4829)
## Iteration: 20 (-151237.9444, 4.3272)
## Iteration: 30 (-148878.8017, 2.9122)
## Iteration: 40 (-147439.3627, 2.1874)
## Iteration: 50 (-146425.3330, 1.7632)
## Group probs = (0.6484, 0.2868, 0.0648)
##
## Outer iteration: 2
## Iteration: 1 (-158853.7916, 2.0681)

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## Iteration: 10 (-158317.6977, 1.3095)
## Iteration: 20 (-157876.6211, 1.1254)
## Iteration: 30 (-157515.1128, 0.9964)
## Iteration: 40 (-157207.8620, 0.8980)
## Iteration: 50 (-156940.6858, 0.8196)
## Group probs = (0.6633, 0.2759, 0.0608)
##
## Outer iteration: 3
## Iteration: 1 (-162634.9986, 1.2512)
## Iteration: 10 (-162403.0046, 0.7665)
## Iteration: 20 (-162176.8223, 0.7135)
## Iteration: 30 (-161973.3807, 0.6673)
## Iteration: 40 (-161788.3964, 0.6268)
## Iteration: 50 (-161618.8952, 0.5911)
## Group probs = (0.6701, 0.2716, 0.0584)
##
## Outer iteration: 4
## Iteration: 1 (-164311.7000, 0.8700)
## Iteration: 10 (-164158.7006, 0.5663)
## Iteration: 20 (-164002.5699, 0.5396)
## Iteration: 30 (-163857.7827, 0.5144)
## Iteration: 40 (-163722.7611, 0.4911)
## Iteration: 50 (-163596.3030, 0.4698)
## Group probs = (0.6734, 0.2697, 0.0569)
##
## Outer iteration: 5
## Iteration: 1 (-164754.6034, 0.8692)
## Iteration: 10 (-164636.9933, 0.4588)
## Iteration: 20 (-164514.9765, 0.4421)
## Iteration: 30 (-164400.0943, 0.4255)
## Iteration: 40 (-164291.4713, 0.4098)
## Iteration: 50 (-164188.4500, 0.3951)
## Group probs = (0.6752, 0.2680, 0.0567)
##
## Outer iteration: 6
## Iteration: 1 (-164707.4947, 1.0014)
## Iteration: 10 (-164609.9367, 0.3888)
## Iteration: 20 (-164508.8225, 0.3758)
## Iteration: 30 (-164413.0157, 0.3632)
## Iteration: 40 (-164321.7685, 0.3514)
## Iteration: 50 (-164234.5930, 0.3403)
## Group probs = (0.6752, 0.2684, 0.0564)
##
## Outer iteration: 7
## Iteration: 1 (-164059.6720, 0.5634)
## Iteration: 10 (-163977.2380, 0.3373)
## Iteration: 20 (-163890.2709, 0.3279)
## Iteration: 30 (-163807.0936, 0.3184)
## Iteration: 40 (-163727.2790, 0.3094)
## Iteration: 50 (-163650.5213, 0.3009)
## Group probs = (0.6760, 0.2677, 0.0563)
##
## Outer iteration: 8
## Iteration: 1 (-163806.2298, 0.5027)

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## Iteration: 10 (-163734.1149, 0.2996)
## Iteration: 20 (-163657.5604, 0.2920)
## Iteration: 30 (-163583.9268, 0.2844)
## Iteration: 40 (-163512.8993, 0.2772)
## Iteration: 50 (-163444.2616, 0.2703)
## Group probs = (0.6757, 0.2682, 0.0561)
##
## Outer iteration: 9
## Iteration: 1 (-163281.4079, 0.6983)
## Iteration: 10 (-163216.6250, 0.2700)
## Iteration: 20 (-163147.9956, 0.2638)
## Iteration: 30 (-163081.8634, 0.2576)
## Iteration: 40 (-163017.9185, 0.2515)
## Iteration: 50 (-162955.9671, 0.2458)
## Group probs = (0.6715, 0.2715, 0.0570)
##
## Outer iteration: 10
## Iteration: 1 (-161188.6114, 0.9253)
## Iteration: 10 (-161132.1271, 0.2442)
## Iteration: 20 (-161072.1229, 0.2380)
## Iteration: 30 (-161013.9950, 0.2325)
## Iteration: 40 (-160957.5211, 0.2275)
## Iteration: 50 (-160902.5779, 0.2229)
## Group probs = (0.6707, 0.2715, 0.0578)
##
## Outer iteration: 11
## Iteration: 1 (-160188.0778, 0.8138)
## Iteration: 10 (-160135.7536, 0.2253)
## Iteration: 20 (-160080.0909, 0.2204)
## Iteration: 30 (-160026.0587, 0.2159)
## Iteration: 40 (-159973.4713, 0.2116)
## Iteration: 50 (-159922.2233, 0.2076)
## Group probs = (0.6666, 0.2748, 0.0585)
##
## Outer iteration: 12
## Iteration: 1 (-158204.2190, 0.4307)
## Iteration: 10 (-158157.7493, 0.2075)
## Iteration: 20 (-158107.9700, 0.2030)
## Iteration: 30 (-158059.5488, 0.1989)
## Iteration: 40 (-158012.3313, 0.1951)
## Iteration: 50 (-157966.2298, 0.1916)
## Group probs = (0.6659, 0.2761, 0.0580)
##
## Outer iteration: 13
## Iteration: 1 (-157717.0294, 0.4969)
## Iteration: 10 (-157674.3497, 0.1915)
## Iteration: 20 (-157628.3084, 0.1884)
## Iteration: 30 (-157583.4081, 0.1853)
## Iteration: 40 (-157539.5465, 0.1822)
## Iteration: 50 (-157496.6582, 0.1792)
## Group probs = (0.6647, 0.2773, 0.0580)
##
## Outer iteration: 14
## Iteration: 1 (-157019.8349, 0.4533)
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## Iteration: 10 (-156980.8337, 0.1775)
## Iteration: 20 (-156938.7956, 0.1748)
## Iteration: 30 (-156897.7010, 0.1722)
## Iteration: 40 (-156857.4745, 0.1697)
## Iteration: 50 (-156818.0707, 0.1672)
## Group probs = (0.6603, 0.2810, 0.0587)
##
## Outer iteration: 15
## Iteration: 1 (-155098.6198, 0.7824)
## Iteration: 10 (-155062.2382, 0.1692)
## Iteration: 20 (-155023.4852, 0.1658)
## Iteration: 30 (-154985.7601, 0.1627)
## Iteration: 40 (-154948.8902, 0.1600)
## Iteration: 50 (-154912.7899, 0.1574)
## Group probs = (0.6625, 0.2789, 0.0586)
##
## Outer iteration: 16
## Iteration: 1 (-155550.6571, 0.8646)
## Iteration: 10 (-155516.4970, 0.1582)
## Iteration: 20 (-155479.7943, 0.1562)
## Iteration: 30 (-155443.9150, 0.1539)
## Iteration: 40 (-155408.7710, 0.1517)
## Iteration: 50 (-155374.3104, 0.1496)
## Group probs = (0.6605, 0.2800, 0.0595)
##
## Outer iteration: 17
## Iteration: 1 (-154365.9457, 1.5942)
## Iteration: 10 (-154333.8963, 0.1486)
## Iteration: 20 (-154300.4936, 0.1457)
## Iteration: 30 (-154267.9116, 0.1436)
## Iteration: 40 (-154235.9732, 0.1416)
## Iteration: 50 (-154204.6146, 0.1399)
## Group probs = (0.6593, 0.2816, 0.0591)
##
## Outer iteration: 18
## Iteration: 1 (-153858.2060, 1.3505)
## Iteration: 10 (-153829.4186, 0.1390)
## Iteration: 20 (-153798.5976, 0.1375)
## Iteration: 30 (-153768.3838, 0.1359)
## Iteration: 40 (-153738.7008, 0.1343)
## Iteration: 50 (-153709.5140, 0.1326)
## Group probs = (0.6565, 0.2842, 0.0594)
##
## Outer iteration: 19
## Iteration: 1 (-152582.9652, 0.4697)
## Iteration: 10 (-152556.4129, 0.1334)
## Iteration: 20 (-152527.6742, 0.1314)
## Iteration: 30 (-152499.4470, 0.1296)
## Iteration: 40 (-152471.6822, 0.1279)
## Iteration: 50 (-152444.3538, 0.1263)
## Group probs = (0.6574, 0.2838, 0.0588)
##
## Outer iteration: 20
## Iteration: 1 (-152807.0659, 0.1420)

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## Iteration: 10 (-152782.6138, 0.1244)
## Iteration: 20 (-152756.0209, 0.1230)
## Iteration: 30 (-152729.8443, 0.1217)
## Iteration: 40 (-152704.0544, 0.1205)
## Iteration: 50 (-152678.6360, 0.1192)
## Group probs = (0.6590, 0.2821, 0.0589)
##
## Outer iteration: 21
## Iteration: 1 (-153147.1944, 0.5105)
## Iteration: 10 (-153123.8846, 0.1187)
## Iteration: 20 (-153098.6482, 0.1176)
## Iteration: 30 (-153073.8154, 0.1165)
## Iteration: 40 (-153049.3452, 0.1153)
## Iteration: 50 (-153025.2192, 0.1142)
## Group probs = (0.6567, 0.2840, 0.0592)
##
## Outer iteration: 22
## Iteration: 1 (-152087.3520, 0.7360)
## Iteration: 10 (-152065.3325, 0.1137)
## Iteration: 20 (-152041.8046, 0.1122)
## Iteration: 30 (-152018.7330, 0.1109)
## Iteration: 40 (-151996.0293, 0.1097)
## Iteration: 50 (-151973.6559, 0.1086)
## Group probs = (0.6546, 0.2865, 0.0589)
##
## Outer iteration: 23
## Iteration: 1 (-151361.9305, 0.8121)
## Iteration: 10 (-151341.2130, 0.1088)
## Iteration: 20 (-151319.0026, 0.1076)
## Iteration: 30 (-151297.1951, 0.1064)
## Iteration: 40 (-151275.7229, 0.1052)
## Iteration: 50 (-151254.5539, 0.1041)
## Group probs = (0.6535, 0.2873, 0.0592)
##
## Outer iteration: 24
## Iteration: 1 (-150712.9742, 0.9572)
## Iteration: 10 (-150693.1520, 0.1047)
## Iteration: 20 (-150671.9722, 0.1036)
## Iteration: 30 (-150651.1768, 0.1025)
## Iteration: 40 (-150630.6982, 0.1015)
## Iteration: 50 (-150610.5065, 0.1004)
## Group probs = (0.6506, 0.2895, 0.0600)
##
## Outer iteration: 25
## Iteration: 1 (-149513.4147, 0.6370)
## Iteration: 10 (-149495.1576, 0.1001)
## Iteration: 20 (-149475.4076, 0.0989)
## Iteration: 30 (-149455.9733, 0.0978)
## Iteration: 40 (-149436.8099, 0.0968)
## Iteration: 50 (-149417.8955, 0.0959)
## Group probs = (0.6522, 0.2880, 0.0599)
##
## Outer iteration: 26
## Iteration: 1 (-150029.2600, 0.2607)

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## Iteration: 10 (-150011.6058, 0.0962)
## Iteration: 20 (-149992.3436, 0.0955)
## Iteration: 30 (-149973.3527, 0.0946)
## Iteration: 40 (-149954.6111, 0.0938)
## Iteration: 50 (-149936.1051, 0.0929)
## Group probs = (0.6523, 0.2876, 0.0601)
##
## Outer iteration: 27
## Iteration: 1 (-149838.3215, 0.7236)
## Iteration: 10 (-149821.2109, 0.0931)
## Iteration: 20 (-149802.7951, 0.0923)
## Iteration: 30 (-149784.6500, 0.0915)
## Iteration: 40 (-149766.7377, 0.0906)
## Iteration: 50 (-149749.0417, 0.0898)
## Group probs = (0.6544, 0.2856, 0.0600)
##
## Outer iteration: 28
## Iteration: 1 (-150477.5401, 1.4643)
## Iteration: 10 (-150460.7668, 0.0889)
## Iteration: 20 (-150443.2145, 0.0880)
## Iteration: 30 (-150425.9694, 0.0873)
## Iteration: 40 (-150408.9513, 0.0866)
## Iteration: 50 (-150392.1319, 0.0859)
## Group probs = (0.6521, 0.2876, 0.0603)
##
## Outer iteration: 29
## Iteration: 1 (-149506.5782, 0.2845)
## Iteration: 10 (-149491.4722, 0.0859)
## Iteration: 20 (-149475.0694, 0.0850)
## Iteration: 30 (-149458.8917, 0.0842)
## Iteration: 40 (-149442.9077, 0.0835)
## Iteration: 50 (-149427.1029, 0.0828)
## Group probs = (0.6518, 0.2882, 0.0599)
##
## Outer iteration: 30
## Iteration: 1 (-149393.8120, 0.3818)
## Iteration: 10 (-149379.3737, 0.0824)
## Iteration: 20 (-149363.6002, 0.0818)
## Iteration: 30 (-149348.0137, 0.0812)
## Iteration: 40 (-149332.5973, 0.0807)
## Iteration: 50 (-149317.3417, 0.0801)
## Group probs = (0.6513, 0.2886, 0.0601)
##
## Outer iteration: 31
## Iteration: 1 (-149157.3601, 0.7663)
## Iteration: 10 (-149142.8405, 0.0797)
## Iteration: 20 (-149127.6271, 0.0790)
## Iteration: 30 (-149112.6829, 0.0784)
## Iteration: 40 (-149097.9379, 0.0779)
## Iteration: 50 (-149083.3642, 0.0773)
## Group probs = (0.6506, 0.2895, 0.0599)
##
## Outer iteration: 32
## Iteration: 1 (-148872.7253, 0.9517)
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## Iteration: 10 (-148858.8951, 0.0775)
## Iteration: 20 (-148844.3913, 0.0769)
## Iteration: 30 (-148830.1227, 0.0763)
## Iteration: 40 (-148816.0247, 0.0757)
## Iteration: 50 (-148802.0737, 0.0751)
## Group probs = (0.6490, 0.2907, 0.0604)
##
## Outer iteration: 33
## Iteration: 1 (-148109.7454, 0.6230)
## Iteration: 10 (-148097.0370, 0.0748)
## Iteration: 20 (-148083.3286, 0.0740)
## Iteration: 30 (-148069.8017, 0.0734)
## Iteration: 40 (-148056.4163, 0.0728)
## Iteration: 50 (-148043.1581, 0.0723)
## Group probs = (0.6484, 0.2908, 0.0607)
##
## Outer iteration: 34
## Iteration: 1 (-147714.7056, 0.6103)
## Iteration: 10 (-147702.3391, 0.0724)
## Iteration: 20 (-147689.0814, 0.0719)
## Iteration: 30 (-147676.0037, 0.0714)
## Iteration: 40 (-147663.0663, 0.0709)
## Iteration: 50 (-147650.2536, 0.0704)
## Group probs = (0.6474, 0.2919, 0.0607)
##
## Outer iteration: 35
## Iteration: 1 (-147349.0040, 0.1904)
## Iteration: 10 (-147337.4904, 0.0700)
## Iteration: 20 (-147324.9128, 0.0695)
## Iteration: 30 (-147312.4664, 0.0690)
## Iteration: 40 (-147300.1360, 0.0686)
## Iteration: 50 (-147287.9145, 0.0681)
## Group probs = (0.6469, 0.2923, 0.0608)
##
## Outer iteration: 36
## Iteration: 1 (-146995.8440, 0.4568)
## Iteration: 10 (-146984.3039, 0.0689)
## Iteration: 20 (-146971.8357, 0.0683)
## Iteration: 30 (-146959.5141, 0.0678)
## Iteration: 40 (-146947.3111, 0.0673)
## Iteration: 50 (-146935.2155, 0.0669)
## Group probs = (0.6455, 0.2937, 0.0608)
##
## Outer iteration: 37
## Iteration: 1 (-146493.2057, 0.2977)
## Iteration: 10 (-146482.1413, 0.0666)
## Iteration: 20 (-146470.2744, 0.0659)
## Iteration: 30 (-146458.5703, 0.0654)
## Iteration: 40 (-146446.9928, 0.0649)
## Iteration: 50 (-146435.5265, 0.0645)
## Group probs = (0.6417, 0.2972, 0.0611)
##
## Outer iteration: 38
## Iteration: 1 (-145139.8289, 1.0776)
```

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## Iteration: 10 (-145129.1105, 0.0650)
## Iteration: 20 (-145117.6586, 0.0644)
## Iteration: 30 (-145106.3445, 0.0639)
## Iteration: 40 (-145095.1358, 0.0635)
## Iteration: 50 (-145084.0210, 0.0631)
## Group probs = (0.6442, 0.2942, 0.0616)
##
## Outer iteration: 39
## Iteration: 1 (-145847.2710, 1.1580)
## Iteration: 10 (-145836.8259, 0.0626)
## Iteration: 20 (-145825.7935, 0.0622)
## Iteration: 30 (-145814.9136, 0.0617)
## Iteration: 40 (-145804.1437, 0.0614)
## Iteration: 50 (-145793.4694, 0.0610)
## Group probs = (0.6461, 0.2925, 0.0614)
##
## Outer iteration: 40
## Iteration: 1 (-146411.7540, 0.2593)
## Iteration: 10 (-146401.9266, 0.0607)
## Iteration: 20 (-146391.2760, 0.0605)
## Iteration: 30 (-146380.7309, 0.0603)
## Iteration: 40 (-146370.2721, 0.0600)
## Iteration: 50 (-146359.8930, 0.0596)
## Group probs = (0.6502, 0.2890, 0.0608)
##
## Outer iteration: 1
## Iteration: 1 (-189735.6272, Inf)
## Iteration: 10 (-156106.0905, 8.5061)
## Iteration: 20 (-151098.0141, 4.3287)
## Iteration: 30 (-148757.4384, 2.9011)
## Iteration: 40 (-147329.8310, 2.1794)
## Iteration: 50 (-146323.1483, 1.7575)
## Group probs = (0.6491, 0.2870, 0.0639)
##
## Outer iteration: 2
## Iteration: 1 (-159533.5522, 1.8700)
## Iteration: 10 (-158999.8197, 1.3117)
## Iteration: 20 (-158560.4077, 1.1271)
## Iteration: 30 (-158200.0483, 0.9980)
## Iteration: 40 (-157893.6994, 0.8995)
## Iteration: 50 (-157627.2969, 0.8210)
## Group probs = (0.6615, 0.2786, 0.0600)
##
## Outer iteration: 3
## Iteration: 1 (-162551.4629, 2.1431)
## Iteration: 10 (-162322.1404, 0.7642)
## Iteration: 20 (-162098.7978, 0.7112)
## Iteration: 30 (-161898.0189, 0.6651)
## Iteration: 40 (-161715.5688, 0.6247)
## Iteration: 50 (-161548.4873, 0.5892)
## Group probs = (0.6705, 0.2710, 0.0585)
##
## Outer iteration: 4
## Iteration: 1 (-164906.8089, 0.8379)
```

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## Iteration: 10 (-164752.2086, 0.5684)
## Iteration: 20 (-164594.8156, 0.5415)
## Iteration: 30 (-164449.1396, 0.5160)
## Iteration: 40 (-164313.4855, 0.4924)
## Iteration: 50 (-164186.5871, 0.4709)
## Group probs = (0.6726, 0.2698, 0.0575)
##
## Outer iteration: 5
## Iteration: 1 (-164949.8721, 1.9624)
## Iteration: 10 (-164829.3036, 0.4607)
## Iteration: 20 (-164706.4390, 0.4431)
## Iteration: 30 (-164591.3783, 0.4257)
## Iteration: 40 (-164482.9367, 0.4094)
## Iteration: 50 (-164380.3228, 0.3944)
## Group probs = (0.6760, 0.2658, 0.0582)
##
## Outer iteration: 6
## Iteration: 1 (-165202.7506, 1.3789)
## Iteration: 10 (-165105.1619, 0.3899)
## Iteration: 20 (-165003.8702, 0.3769)
## Iteration: 30 (-164907.9594, 0.3641)
## Iteration: 40 (-164816.6855, 0.3521)
## Iteration: 50 (-164729.5441, 0.3409)
## Group probs = (0.6757, 0.2667, 0.0576)
##
## Outer iteration: 7
## Iteration: 1 (-164625.7217, 0.6118)
## Iteration: 10 (-164544.9242, 0.3360)
## Iteration: 20 (-164459.3579, 0.3269)
## Iteration: 30 (-164377.3904, 0.3177)
## Iteration: 40 (-164298.6711, 0.3088)
## Iteration: 50 (-164222.9304, 0.3004)
## Group probs = (0.6727, 0.2691, 0.0582)
##
## Outer iteration: 8
## Iteration: 1 (-162993.5667, 0.6926)
## Iteration: 10 (-162923.3738, 0.2975)
## Iteration: 20 (-162849.1269, 0.2896)
## Iteration: 30 (-162777.7443, 0.2820)
## Iteration: 40 (-162708.8930, 0.2748)
## Iteration: 50 (-162642.3555, 0.2680)
## Group probs = (0.6659, 0.2744, 0.0597)
##
## Outer iteration: 9
## Iteration: 1 (-159766.4030, 0.8635)
## Iteration: 10 (-159701.9787, 0.2711)
## Iteration: 20 (-159634.7325, 0.2631)
## Iteration: 30 (-159570.1486, 0.2560)
## Iteration: 40 (-159507.7694, 0.2496)
## Iteration: 50 (-159447.3584, 0.2438)
## Group probs = (0.6679, 0.2726, 0.0594)
##
## Outer iteration: 10
## Iteration: 1 (-160127.5142, 0.6170)
```

```
## Iteration: 10 (-160071.1867, 0.2433)
## Iteration: 20 (-160010.7828, 0.2385)
## Iteration: 30 (-159952.2237, 0.2335)
## Iteration: 40 (-159895.3466, 0.2287)
## Iteration: 50 (-159840.0366, 0.2241)
## Group probs = (0.6637, 0.2765, 0.0599)
##
## Outer iteration: 11
## Iteration: 1 (-158350.6110, 0.5976)
## Iteration: 10 (-158299.5324, 0.2233)
## Iteration: 20 (-158244.7319, 0.2190)
## Iteration: 30 (-158191.5130, 0.2148)
## Iteration: 40 (-158139.7268, 0.2107)
## Iteration: 50 (-158089.2726, 0.2067)
## Group probs = (0.6616, 0.2779, 0.0605)
##
## Outer iteration: 12
## Iteration: 1 (-157125.3548, 0.3198)
## Iteration: 10 (-157078.7727, 0.2068)
## Iteration: 20 (-157028.6823, 0.2029)
## Iteration: 30 (-156979.9164, 0.1991)
## Iteration: 40 (-156932.3592, 0.1955)
## Iteration: 50 (-156885.9343, 0.1920)
## Group probs = (0.6595, 0.2789, 0.0615)
##
## Outer iteration: 13
## Iteration: 1 (-155961.8966, 0.5799)
## Iteration: 10 (-155919.2986, 0.1927)
## Iteration: 20 (-155873.6143, 0.1887)
## Iteration: 30 (-155829.1403, 0.1851)
## Iteration: 40 (-155785.7337, 0.1817)
## Iteration: 50 (-155743.3121, 0.1786)
## Group probs = (0.6564, 0.2809, 0.0627)
##
## Outer iteration: 14
## Iteration: 1 (-154329.4970, 0.7490)
## Iteration: 10 (-154290.5114, 0.1795)
## Iteration: 20 (-154248.7562, 0.1759)
## Iteration: 30 (-154208.0209, 0.1728)
## Iteration: 40 (-154168.1855, 0.1699)
## Iteration: 50 (-154129.1855, 0.1673)
## Group probs = (0.6539, 0.2826, 0.0636)
##
## Outer iteration: 15
## Iteration: 1 (-153070.5350, 0.6635)
## Iteration: 10 (-153034.7101, 0.1675)
## Iteration: 20 (-152996.3010, 0.1644)
## Iteration: 30 (-152958.7719, 0.1617)
## Iteration: 40 (-152922.0148, 0.1592)
## Iteration: 50 (-152885.9772, 0.1569)
## Group probs = (0.6517, 0.2845, 0.0638)
##
## Outer iteration: 16
## Iteration: 1 (-152064.3091, 0.7580)
```

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## Iteration: 10 (-152031.5044, 0.1569)
## Iteration: 20 (-151996.0056, 0.1545)
## Iteration: 30 (-151961.2656, 0.1521)
## Iteration: 40 (-151927.2107, 0.1499)
## Iteration: 50 (-151893.7955, 0.1478)
## Group probs = (0.6505, 0.2851, 0.0644)
##
## Outer iteration: 17
## Iteration: 1 (-151349.9261, 0.5625)
## Iteration: 10 (-151319.9331, 0.1469)
## Iteration: 20 (-151287.3865, 0.1449)
## Iteration: 30 (-151255.4506, 0.1429)
## Iteration: 40 (-151224.0794, 0.1410)
## Iteration: 50 (-151193.2458, 0.1392)
## Group probs = (0.6482, 0.2870, 0.0648)
##
## Outer iteration: 18
## Iteration: 1 (-150341.4250, 0.5988)
## Iteration: 10 (-150312.9578, 0.1400)
## Iteration: 20 (-150282.1433, 0.1381)
## Iteration: 30 (-150251.9308, 0.1362)
## Iteration: 40 (-150222.2624, 0.1344)
## Iteration: 50 (-150193.1031, 0.1327)
## Group probs = (0.6483, 0.2871, 0.0646)
##
## Outer iteration: 19
## Iteration: 1 (-150191.2736, 0.2295)
## Iteration: 10 (-150164.8740, 0.1318)
## Iteration: 20 (-150136.2753, 0.1303)
## Iteration: 30 (-150108.1947, 0.1288)
## Iteration: 40 (-150080.5844, 0.1273)
## Iteration: 50 (-150053.4181, 0.1258)
## Group probs = (0.6453, 0.2888, 0.0659)
##
## Outer iteration: 20
## Iteration: 1 (-148857.2326, 0.4126)
## Iteration: 10 (-148832.3906, 0.1265)
## Iteration: 20 (-148805.6755, 0.1245)
## Iteration: 30 (-148779.4734, 0.1228)
## Iteration: 40 (-148753.7062, 0.1212)
## Iteration: 50 (-148728.3385, 0.1198)
## Group probs = (0.6435, 0.2907, 0.0659)
##
## Outer iteration: 21
## Iteration: 1 (-147988.1541, 0.5164)
## Iteration: 10 (-147964.8946, 0.1198)
## Iteration: 20 (-147939.6473, 0.1181)
## Iteration: 30 (-147914.7917, 0.1168)
## Iteration: 40 (-147890.2967, 0.1155)
## Iteration: 50 (-147866.1464, 0.1143)
## Group probs = (0.6424, 0.2914, 0.0662)
##
## Outer iteration: 22
## Iteration: 1 (-147430.7621, 0.7448)
```

```
## Iteration: 10 (-147408.9277, 0.1141)
## Iteration: 20 (-147385.2501, 0.1128)
## Iteration: 30 (-147361.9420, 0.1116)
## Iteration: 40 (-147338.9725, 0.1104)
## Iteration: 50 (-147316.3247, 0.1092)
## Group probs = (0.6419, 0.2912, 0.0669)
##
## Outer iteration: 23
## Iteration: 1 (-147101.2136, 0.9944)
## Iteration: 10 (-147079.8160, 0.1098)
## Iteration: 20 (-147057.1756, 0.1085)
## Iteration: 30 (-147034.9922, 0.1072)
## Iteration: 40 (-147013.1748, 0.1060)
## Iteration: 50 (-146991.6844, 0.1049)
## Group probs = (0.6374, 0.2952, 0.0674)
##
## Outer iteration: 24
## Iteration: 1 (-145333.9631, 0.5823)
## Iteration: 10 (-145314.9510, 0.1044)
## Iteration: 20 (-145294.2605, 0.1030)
## Iteration: 30 (-145273.8703, 0.1018)
## Iteration: 40 (-145253.7509, 0.1007)
## Iteration: 50 (-145233.8871, 0.0997)
## Group probs = (0.6360, 0.2960, 0.0680)
##
## Outer iteration: 25
## Iteration: 1 (-144738.8701, 0.7624)
## Iteration: 10 (-144720.0700, 0.1005)
## Iteration: 20 (-144699.9505, 0.0995)
## Iteration: 30 (-144680.1997, 0.0984)
## Iteration: 40 (-144660.7540, 0.0974)
## Iteration: 50 (-144641.5829, 0.0964)
## Group probs = (0.6368, 0.2943, 0.0689)
##
## Outer iteration: 26
## Iteration: 1 (-144711.3760, 0.9196)
## Iteration: 10 (-144692.5119, 0.0980)
## Iteration: 20 (-144672.7846, 0.0969)
## Iteration: 30 (-144653.5276, 0.0959)
## Iteration: 40 (-144634.6217, 0.0948)
## Iteration: 50 (-144616.0169, 0.0938)
## Group probs = (0.6362, 0.2948, 0.0690)
##
## Outer iteration: 27
## Iteration: 1 (-144458.8734, 1.5274)
## Iteration: 10 (-144441.1299, 0.0932)
## Iteration: 20 (-144422.8876, 0.0918)
## Iteration: 30 (-144405.0355, 0.0908)
## Iteration: 40 (-144387.4490, 0.0899)
## Iteration: 50 (-144370.0884, 0.0891)
## Group probs = (0.6377, 0.2934, 0.0689)
##
## Outer iteration: 28
## Iteration: 1 (-144907.8161, 0.3051)
```

```
## Iteration: 10 (-144891.9087, 0.0887)
## Iteration: 20 (-144874.6791, 0.0880)
## Iteration: 30 (-144857.6890, 0.0873)
## Iteration: 40 (-144840.9032, 0.0866)
## Iteration: 50 (-144824.3059, 0.0860)
## Group probs = (0.6374, 0.2938, 0.0689)
##
## Outer iteration: 29
## Iteration: 1 (-144716.6988, 0.2319)
## Iteration: 10 (-144701.1431, 0.0861)
## Iteration: 20 (-144684.5988, 0.0852)
## Iteration: 30 (-144668.3272, 0.0843)
## Iteration: 40 (-144652.2595, 0.0836)
## Iteration: 50 (-144636.3726, 0.0829)
## Group probs = (0.6332, 0.2974, 0.0694)
##
## Outer iteration: 30
## Iteration: 1 (-143180.8748, 1.3088)
## Iteration: 10 (-143165.9295, 0.0822)
## Iteration: 20 (-143150.3535, 0.0813)
## Iteration: 30 (-143135.0600, 0.0806)
## Iteration: 40 (-143119.9666, 0.0800)
## Iteration: 50 (-143105.0457, 0.0794)
## Group probs = (0.6316, 0.2990, 0.0695)
##
## Outer iteration: 31
## Iteration: 1 (-142514.4428, 0.4672)
## Iteration: 10 (-142500.9645, 0.0790)
## Iteration: 20 (-142486.3090, 0.0785)
## Iteration: 30 (-142471.8191, 0.0780)
## Iteration: 40 (-142457.4762, 0.0774)
## Iteration: 50 (-142443.2726, 0.0769)
## Group probs = (0.6343, 0.2964, 0.0694)
##
## Outer iteration: 32
## Iteration: 1 (-143448.7347, 0.3602)
## Iteration: 10 (-143435.0878, 0.0769)
## Iteration: 20 (-143420.5659, 0.0766)
## Iteration: 30 (-143406.2681, 0.0761)
## Iteration: 40 (-143392.1393, 0.0756)
## Iteration: 50 (-143378.1596, 0.0751)
## Group probs = (0.6347, 0.2960, 0.0693)
##
## Outer iteration: 33
## Iteration: 1 (-143485.4885, 0.8851)
## Iteration: 10 (-143471.8489, 0.0757)
## Iteration: 20 (-143457.6395, 0.0749)
## Iteration: 30 (-143443.7228, 0.0742)
## Iteration: 40 (-143430.0049, 0.0735)
## Iteration: 50 (-143416.4521, 0.0730)
## Group probs = (0.6327, 0.2974, 0.0699)
##
## Outer iteration: 34
## Iteration: 1 (-142674.7645, 0.3719)
```

```
## Iteration: 10 (-142662.6225, 0.0725)
## Iteration: 20 (-142649.4008, 0.0719)
## Iteration: 30 (-142636.3218, 0.0714)
## Iteration: 40 (-142623.3706, 0.0709)
## Iteration: 50 (-142610.5402, 0.0705)
## Group probs = (0.6331, 0.2970, 0.0699)
##
## Outer iteration: 35
## Iteration: 1 (-142794.5614, 0.6527)
## Iteration: 10 (-142782.8285, 0.0699)
## Iteration: 20 (-142770.1418, 0.0696)
## Iteration: 30 (-142757.6078, 0.0692)
## Iteration: 40 (-142745.1987, 0.0688)
## Iteration: 50 (-142732.9042, 0.0683)
## Group probs = (0.6323, 0.2975, 0.0702)
##
## Outer iteration: 36
## Iteration: 1 (-142544.2950, 0.9305)
## Iteration: 10 (-142532.7876, 0.0688)
## Iteration: 20 (-142520.4139, 0.0683)
## Iteration: 30 (-142508.1886, 0.0678)
## Iteration: 40 (-142496.0836, 0.0673)
## Iteration: 50 (-142484.0884, 0.0668)
## Group probs = (0.6288, 0.3001, 0.0711)
##
## Outer iteration: 37
## Iteration: 1 (-141174.4711, 0.9404)
## Iteration: 10 (-141163.1776, 0.0667)
## Iteration: 20 (-141151.3773, 0.0658)
## Iteration: 30 (-141139.8081, 0.0652)
## Iteration: 40 (-141128.3876, 0.0647)
## Iteration: 50 (-141117.0866, 0.0642)
## Group probs = (0.6287, 0.2999, 0.0714)
##
## Outer iteration: 38
## Iteration: 1 (-140972.7038, 0.2568)
## Iteration: 10 (-140961.4810, 0.0653)
## Iteration: 20 (-140949.7321, 0.0649)
## Iteration: 30 (-140938.1987, 0.0644)
## Iteration: 40 (-140926.8120, 0.0639)
## Iteration: 50 (-140915.5476, 0.0635)
## Group probs = (0.6289, 0.2999, 0.0712)
##
## Outer iteration: 39
## Iteration: 1 (-141027.5902, 0.7011)
## Iteration: 10 (-141017.0060, 0.0635)
## Iteration: 20 (-141005.7402, 0.0630)
## Iteration: 30 (-140994.6168, 0.0625)
## Iteration: 40 (-140983.6052, 0.0621)
## Iteration: 50 (-140972.6963, 0.0617)
## Group probs = (0.6285, 0.3000, 0.0714)
##
## Outer iteration: 40
## Iteration: 1 (-140884.7225, 0.4019)
```

```

## Iteration: 10 (-140874.5137, 0.0621)
## Iteration: 20 (-140863.4369, 0.0618)
## Iteration: 30 (-140852.4894, 0.0614)
## Iteration: 40 (-140841.6509, 0.0611)
## Iteration: 50 (-140830.9124, 0.0607)
## Group probs = (0.6264, 0.3016, 0.0720)
##
## CCES_2013
## Outer iteration: 1
## Iteration: 1 (-71326.0777, Inf)
## Iteration: 10 (-60961.8516, 4.6453)
## Iteration: 20 (-59438.4763, 2.3040)
## Iteration: 30 (-58732.0094, 1.5552)
## Iteration: 40 (-58289.9173, 1.1851)
## Iteration: 50 (-57974.4390, 0.9629)
## Group probs = (0.6447, 0.2908, 0.0645)
##
## Outer iteration: 2
## Iteration: 1 (-61243.9113, 1.3959)
## Iteration: 10 (-61068.8202, 0.7158)
## Iteration: 20 (-60932.7505, 0.6074)
## Iteration: 30 (-60822.1859, 0.5341)
## Iteration: 40 (-60728.8474, 0.4787)
## Iteration: 50 (-60648.2897, 0.4345)
## Group probs = (0.6489, 0.2875, 0.0636)
##
## Outer iteration: 3
## Iteration: 1 (-61213.1316, 1.6130)
## Iteration: 10 (-61134.2040, 0.4089)
## Iteration: 20 (-61067.0438, 0.3728)
## Iteration: 30 (-61008.4326, 0.3449)
## Iteration: 40 (-60955.9159, 0.3218)
## Iteration: 50 (-60908.2611, 0.3018)
## Group probs = (0.6508, 0.2854, 0.0638)
##
## Outer iteration: 4
## Iteration: 1 (-61225.6315, 0.5829)
## Iteration: 10 (-61175.2637, 0.2951)
## Iteration: 20 (-61131.1941, 0.2746)
## Iteration: 30 (-61091.6629, 0.2589)
## Iteration: 40 (-61055.3196, 0.2457)
## Iteration: 50 (-61021.5599, 0.2341)
## Group probs = (0.6537, 0.2816, 0.0647)
##
## Outer iteration: 5
## Iteration: 1 (-61418.9244, 1.0269)
## Iteration: 10 (-61383.9003, 0.2312)
## Iteration: 20 (-61351.1901, 0.2193)
## Iteration: 30 (-61321.1551, 0.2095)
## Iteration: 40 (-61293.0848, 0.2010)
## Iteration: 50 (-61266.6404, 0.1934)
## Group probs = (0.6543, 0.2814, 0.0643)
##
## Outer iteration: 6

```

```
## Iteration: 1 (-61475.5745, 0.8299)
## Iteration: 10 (-61445.4660, 0.1956)
## Iteration: 20 (-61418.6795, 0.1855)
## Iteration: 30 (-61394.1604, 0.1779)
## Iteration: 40 (-61371.1686, 0.1716)
## Iteration: 50 (-61349.3929, 0.1661)
## Group probs = (0.6534, 0.2815, 0.0651)
##
## Outer iteration: 7
## Iteration: 1 (-61281.0949, 0.3070)
## Iteration: 10 (-61257.6796, 0.1688)
## Iteration: 20 (-61235.7773, 0.1612)
## Iteration: 30 (-61215.4355, 0.1554)
## Iteration: 40 (-61196.1935, 0.1506)
## Iteration: 50 (-61177.8403, 0.1463)
## Group probs = (0.6521, 0.2816, 0.0663)
##
## Outer iteration: 8
## Iteration: 1 (-61015.6543, 0.4460)
## Iteration: 10 (-60996.9537, 0.1492)
## Iteration: 20 (-60978.5710, 0.1436)
## Iteration: 30 (-60961.2773, 0.1390)
## Iteration: 40 (-60944.7849, 0.1351)
## Iteration: 50 (-60928.9490, 0.1316)
## Group probs = (0.6510, 0.2830, 0.0660)
##
## Outer iteration: 9
## Iteration: 1 (-60903.4458, 0.5168)
## Iteration: 10 (-60886.5502, 0.1351)
## Iteration: 20 (-60870.2899, 0.1303)
## Iteration: 30 (-60854.9966, 0.1263)
## Iteration: 40 (-60840.3886, 0.1230)
## Iteration: 50 (-60826.3321, 0.1200)
## Group probs = (0.6572, 0.2775, 0.0652)
##
## Outer iteration: 10
## Iteration: 1 (-61706.5808, 0.1541)
## Iteration: 10 (-61692.7920, 0.1189)
## Iteration: 20 (-61678.8008, 0.1165)
## Iteration: 30 (-61665.3617, 0.1142)
## Iteration: 40 (-61652.3524, 0.1120)
## Iteration: 50 (-61639.7165, 0.1098)
## Group probs = (0.6548, 0.2792, 0.0660)
##
## Outer iteration: 11
## Iteration: 1 (-61287.1242, 0.3340)
## Iteration: 10 (-61274.8070, 0.1119)
## Iteration: 20 (-61262.2451, 0.1089)
## Iteration: 30 (-61250.1751, 0.1063)
## Iteration: 40 (-61238.4859, 0.1040)
## Iteration: 50 (-61227.1222, 0.1019)
## Group probs = (0.6512, 0.2819, 0.0668)
##
## Outer iteration: 12
```

```
## Iteration: 1 (-60741.4556, 0.7699)
## Iteration: 10 (-60730.2958, 0.1046)
## Iteration: 20 (-60718.9154, 0.1016)
## Iteration: 30 (-60707.9968, 0.0990)
## Iteration: 40 (-60697.4299, 0.0968)
## Iteration: 50 (-60687.1571, 0.0948)
## Group probs = (0.6493, 0.2832, 0.0674)
##
## Outer iteration: 13
## Iteration: 1 (-60430.5686, 0.5852)
## Iteration: 10 (-60420.5782, 0.0963)
## Iteration: 20 (-60410.1501, 0.0944)
## Iteration: 30 (-60400.0786, 0.0927)
## Iteration: 40 (-60390.2919, 0.0910)
## Iteration: 50 (-60380.7508, 0.0895)
## Group probs = (0.6477, 0.2844, 0.0679)
##
## Outer iteration: 14
## Iteration: 1 (-60141.3643, 0.2389)
## Iteration: 10 (-60132.5924, 0.0890)
## Iteration: 20 (-60123.2457, 0.0873)
## Iteration: 30 (-60114.1536, 0.0858)
## Iteration: 40 (-60105.2792, 0.0844)
## Iteration: 50 (-60096.5996, 0.0831)
## Group probs = (0.6410, 0.2894, 0.0695)
##
## Outer iteration: 15
## Iteration: 1 (-59111.6939, 0.5989)
## Iteration: 10 (-59102.7870, 0.0859)
## Iteration: 20 (-59093.8026, 0.0839)
## Iteration: 30 (-59085.1967, 0.0822)
## Iteration: 40 (-59076.8704, 0.0808)
## Iteration: 50 (-59068.7727, 0.0795)
## Group probs = (0.6384, 0.2930, 0.0686)
##
## Outer iteration: 16
## Iteration: 1 (-58782.1594, 0.8023)
## Iteration: 10 (-58774.0707, 0.0803)
## Iteration: 20 (-58765.8801, 0.0786)
## Iteration: 30 (-58757.9895, 0.0772)
## Iteration: 40 (-58750.3270, 0.0759)
## Iteration: 50 (-58742.8571, 0.0748)
## Group probs = (0.6396, 0.2919, 0.0685)
##
## Outer iteration: 17
## Iteration: 1 (-58922.9296, 0.2089)
## Iteration: 10 (-58916.0152, 0.0750)
## Iteration: 20 (-58908.5603, 0.0739)
## Iteration: 30 (-58901.2735, 0.0729)
## Iteration: 40 (-58894.1360, 0.0720)
## Iteration: 50 (-58887.1354, 0.0711)
## Group probs = (0.6414, 0.2900, 0.0686)
##
## Outer iteration: 18
```

```
## Iteration: 1 (-59084.4735, 0.4175)
## Iteration: 10 (-59077.9720, 0.0714)
## Iteration: 20 (-59071.0270, 0.0706)
## Iteration: 30 (-59064.2215, 0.0699)
## Iteration: 40 (-59057.5394, 0.0691)
## Iteration: 50 (-59050.9716, 0.0684)
## Group probs = (0.6380, 0.2938, 0.0682)
##
## Outer iteration: 19
## Iteration: 1 (-58642.3194, 0.3729)
## Iteration: 10 (-58636.0002, 0.0676)
## Iteration: 20 (-58629.3847, 0.0668)
## Iteration: 30 (-58622.9438, 0.0660)
## Iteration: 40 (-58616.6417, 0.0653)
## Iteration: 50 (-58610.4607, 0.0646)
## Group probs = (0.6326, 0.2988, 0.0687)
##
## Outer iteration: 20
## Iteration: 1 (-57842.0415, 0.8223)
## Iteration: 10 (-57835.4002, 0.0660)
## Iteration: 20 (-57828.8199, 0.0647)
## Iteration: 30 (-57822.5220, 0.0637)
## Iteration: 40 (-57816.4237, 0.0629)
## Iteration: 50 (-57810.4856, 0.0622)
## Group probs = (0.6272, 0.3041, 0.0687)
##
## Outer iteration: 21
## Iteration: 1 (-57097.7868, 0.2968)
## Iteration: 10 (-57091.5060, 0.0647)
## Iteration: 20 (-57085.1655, 0.0637)
## Iteration: 30 (-57079.0952, 0.0629)
## Iteration: 40 (-57073.2228, 0.0622)
## Iteration: 50 (-57067.5108, 0.0616)
## Group probs = (0.6244, 0.3065, 0.0692)
##
## Outer iteration: 22
## Iteration: 1 (-56663.0231, 0.6669)
## Iteration: 10 (-56657.1820, 0.0615)
## Iteration: 20 (-56651.1651, 0.0606)
## Iteration: 30 (-56645.3895, 0.0598)
## Iteration: 40 (-56639.7973, 0.0592)
## Iteration: 50 (-56634.3554, 0.0586)
## Group probs = (0.6223, 0.3088, 0.0689)
##
## Outer iteration: 23
## Iteration: 1 (-56347.3887, 0.4947)
## Iteration: 10 (-56342.0098, 0.0600)
## Iteration: 20 (-56336.4011, 0.0593)
## Iteration: 30 (-56330.9577, 0.0587)
## Iteration: 40 (-56325.6451, 0.0581)
## Iteration: 50 (-56320.4454, 0.0576)
## Group probs = (0.6164, 0.3147, 0.0689)
##
## Outer iteration: 24
```

```

## Iteration: 1 (-55572.3507, 0.9083)
## Iteration: 10 (-55566.7456, 0.0576)
## Iteration: 20 (-55561.1083, 0.0571)
## Iteration: 30 (-55555.7151, 0.0566)
## Iteration: 40 (-55550.4988, 0.0561)
## Iteration: 50 (-55545.4251, 0.0556)
## Group probs = (0.6139, 0.3179, 0.0682)
##
## Outer iteration: 25
## Iteration: 1 (-55230.6521, 0.2916)
## Iteration: 10 (-55225.3399, 0.0575)
## Iteration: 20 (-55219.8631, 0.0568)
## Iteration: 30 (-55214.5813, 0.0562)
## Iteration: 40 (-55209.4477, 0.0557)
## Iteration: 50 (-55204.4376, 0.0552)
## Group probs = (0.6144, 0.3179, 0.0677)
##
## Outer iteration: 26
## Iteration: 1 (-55269.3714, 0.5129)
## Iteration: 10 (-55264.3141, 0.0607)
## Iteration: 20 (-55258.9902, 0.0597)
## Iteration: 30 (-55253.8071, 0.0588)
## Iteration: 40 (-55248.7367, 0.0581)
## Iteration: 50 (-55243.7643, 0.0575)
## Group probs = (0.6140, 0.3176, 0.0683)
##
## Outer iteration: 27
## Iteration: 1 (-55143.8434, 0.5094)
## Iteration: 10 (-55139.0586, 0.0573)
## Iteration: 20 (-55134.0074, 0.0557)
## Iteration: 30 (-55129.0536, 0.0549)
## Iteration: 40 (-55124.1814, 0.0543)
## Iteration: 50 (-55119.3840, 0.0538)
## Group probs = (0.6152, 0.3164, 0.0684)
##
## Outer iteration: 28
## Iteration: 1 (-55217.9267, 0.2331)
## Iteration: 10 (-55213.4713, 0.0539)
## Iteration: 20 (-55208.6599, 0.0533)
## Iteration: 30 (-55203.9197, 0.0528)
## Iteration: 40 (-55199.2439, 0.0522)
## Iteration: 50 (-55194.6286, 0.0517)
## Group probs = (0.6130, 0.3196, 0.0673)
##
## Outer iteration: 29
## Iteration: 1 (-54967.8778, 0.7982)
## Iteration: 10 (-54963.4043, 0.0511)
## Iteration: 20 (-54958.6584, 0.0509)
## Iteration: 30 (-54953.9926, 0.0505)
## Iteration: 40 (-54949.3928, 0.0501)
## Iteration: 50 (-54944.8526, 0.0497)
## Group probs = (0.6118, 0.3202, 0.0680)
##
## Outer iteration: 30

```

```
## Iteration: 1 (-54742.9192, 0.4956)
## Iteration: 10 (-54738.3732, 0.0489)
## Iteration: 20 (-54733.6437, 0.0479)
## Iteration: 30 (-54729.0146, 0.0475)
## Iteration: 40 (-54724.4610, 0.0471)
## Iteration: 50 (-54719.9727, 0.0467)
## Group probs = (0.6130, 0.3199, 0.0671)
##
## Outer iteration: 31
## Iteration: 1 (-54935.0195, 0.6325)
## Iteration: 10 (-54930.6900, 0.0463)
## Iteration: 20 (-54926.0677, 0.0457)
## Iteration: 30 (-54921.5309, 0.0452)
## Iteration: 40 (-54917.0645, 0.0449)
## Iteration: 50 (-54912.6608, 0.0445)
## Group probs = (0.6120, 0.3213, 0.0667)
##
## Outer iteration: 32
## Iteration: 1 (-54739.6674, 0.7937)
## Iteration: 10 (-54735.2458, 0.0470)
## Iteration: 20 (-54730.6223, 0.0470)
## Iteration: 30 (-54726.0868, 0.0465)
## Iteration: 40 (-54721.6173, 0.0461)
## Iteration: 50 (-54717.2055, 0.0457)
## Group probs = (0.6104, 0.3237, 0.0660)
##
## Outer iteration: 33
## Iteration: 1 (-54567.0936, 0.7922)
## Iteration: 10 (-54562.7702, 0.0465)
## Iteration: 20 (-54558.1441, 0.0460)
## Iteration: 30 (-54553.5992, 0.0454)
## Iteration: 40 (-54549.1204, 0.0449)
## Iteration: 50 (-54544.7007, 0.0445)
## Group probs = (0.6113, 0.3231, 0.0656)
##
## Outer iteration: 34
## Iteration: 1 (-54682.6038, 0.5927)
## Iteration: 10 (-54678.5008, 0.0445)
## Iteration: 20 (-54674.0383, 0.0441)
## Iteration: 30 (-54669.6327, 0.0437)
## Iteration: 40 (-54665.2787, 0.0434)
## Iteration: 50 (-54660.9737, 0.0430)
## Group probs = (0.6117, 0.3233, 0.0650)
##
## Outer iteration: 35
## Iteration: 1 (-54712.3342, 0.2529)
## Iteration: 10 (-54708.2651, 0.0415)
## Iteration: 20 (-54703.8965, 0.0414)
## Iteration: 30 (-54699.5908, 0.0412)
## Iteration: 40 (-54695.3383, 0.0410)
## Iteration: 50 (-54691.1346, 0.0407)
## Group probs = (0.6112, 0.3238, 0.0650)
##
## Outer iteration: 36
```

```

## Iteration: 1 (-54637.0072, 1.0533)
## Iteration: 10 (-54632.9369, 0.0404)
## Iteration: 20 (-54628.6058, 0.0400)
## Iteration: 30 (-54624.3430, 0.0397)
## Iteration: 40 (-54620.1351, 0.0394)
## Iteration: 50 (-54615.9769, 0.0392)
## Group probs = (0.6111, 0.3246, 0.0643)
##
## Outer iteration: 37
## Iteration: 1 (-54592.0665, 0.5643)
## Iteration: 10 (-54588.0209, 0.0389)
## Iteration: 20 (-54583.7104, 0.0388)
## Iteration: 30 (-54579.4746, 0.0387)
## Iteration: 40 (-54575.2998, 0.0385)
## Iteration: 50 (-54571.1794, 0.0382)
## Group probs = (0.6120, 0.3242, 0.0638)
##
## Outer iteration: 38
## Iteration: 1 (-54714.9724, 1.1415)
## Iteration: 10 (-54710.9895, 0.0405)
## Iteration: 20 (-54706.7466, 0.0396)
## Iteration: 30 (-54702.5840, 0.0390)
## Iteration: 40 (-54698.4820, 0.0385)
## Iteration: 50 (-54694.4318, 0.0382)
## Group probs = (0.6162, 0.3210, 0.0628)
##
## Outer iteration: 39
## Iteration: 1 (-55261.4003, 0.8586)
## Iteration: 10 (-55257.3319, 0.0366)
## Iteration: 20 (-55253.1449, 0.0367)
## Iteration: 30 (-55249.0570, 0.0366)
## Iteration: 40 (-55245.0406, 0.0365)
## Iteration: 50 (-55241.0832, 0.0363)
## Group probs = (0.6121, 0.3247, 0.0632)
##
## Outer iteration: 40
## Iteration: 1 (-54686.3702, 0.5998)
## Iteration: 10 (-54682.7137, 0.0370)
## Iteration: 20 (-54678.7640, 0.0367)
## Iteration: 30 (-54674.8617, 0.0364)
## Iteration: 40 (-54671.0008, 0.0361)
## Iteration: 50 (-54667.1786, 0.0359)
## Group probs = (0.6122, 0.3249, 0.0629)
##
## Outer iteration: 1
## Iteration: 1 (-71110.7919,   Inf)
## Iteration: 10 (-60753.0470, 4.6530)
## Iteration: 20 (-59219.9354, 2.3108)
## Iteration: 30 (-58506.2109, 1.5601)
## Iteration: 40 (-58058.8874, 1.1887)
## Iteration: 50 (-57739.4452, 0.9656)
## Group probs = (0.6398, 0.2929, 0.0673)
##
## Outer iteration: 2

```

```
## Iteration: 1 (-60714.3423, 1.8043)
## Iteration: 10 (-60537.4769, 0.7079)
## Iteration: 20 (-60403.5672, 0.5988)
## Iteration: 30 (-60295.2040, 0.5263)
## Iteration: 40 (-60203.8111, 0.4718)
## Iteration: 50 (-60124.9373, 0.4284)
## Group probs = (0.6479, 0.2858, 0.0663)
##
## Outer iteration: 3
## Iteration: 1 (-61234.4395, 1.1218)
## Iteration: 10 (-61155.0911, 0.4044)
## Iteration: 20 (-61088.3533, 0.3686)
## Iteration: 30 (-61030.1113, 0.3413)
## Iteration: 40 (-60977.8945, 0.3186)
## Iteration: 50 (-60930.4960, 0.2991)
## Group probs = (0.6514, 0.2820, 0.0667)
##
## Outer iteration: 4
## Iteration: 1 (-61382.4005, 0.9977)
## Iteration: 10 (-61331.2930, 0.2930)
## Iteration: 20 (-61287.0969, 0.2729)
## Iteration: 30 (-61247.4655, 0.2576)
## Iteration: 40 (-61211.0324, 0.2446)
## Iteration: 50 (-61177.1994, 0.2332)
## Group probs = (0.6532, 0.2803, 0.0665)
##
## Outer iteration: 5
## Iteration: 1 (-61576.0060, 0.6110)
## Iteration: 10 (-61536.6221, 0.2340)
## Iteration: 20 (-61503.1642, 0.2190)
## Iteration: 30 (-61472.9236, 0.2085)
## Iteration: 40 (-61444.8213, 0.1998)
## Iteration: 50 (-61418.4292, 0.1922)
## Group probs = (0.6527, 0.2798, 0.0675)
##
## Outer iteration: 6
## Iteration: 1 (-61373.1265, 0.7137)
## Iteration: 10 (-61343.2913, 0.1958)
## Iteration: 20 (-61316.8043, 0.1851)
## Iteration: 30 (-61292.5524, 0.1773)
## Iteration: 40 (-61269.8144, 0.1709)
## Iteration: 50 (-61248.2837, 0.1654)
## Group probs = (0.6507, 0.2808, 0.0685)
##
## Outer iteration: 7
## Iteration: 1 (-61000.8758, 0.6064)
## Iteration: 10 (-60977.0845, 0.1708)
## Iteration: 20 (-60955.0450, 0.1628)
## Iteration: 30 (-60934.6523, 0.1567)
## Iteration: 40 (-60915.3994, 0.1516)
## Iteration: 50 (-60897.0562, 0.1471)
## Group probs = (0.6507, 0.2802, 0.0691)
##
## Outer iteration: 8
```

```
## Iteration: 1 (-60918.8506, 0.2913)
## Iteration: 10 (-60899.9537, 0.1506)
## Iteration: 20 (-60881.5225, 0.1449)
## Iteration: 30 (-60864.1527, 0.1403)
## Iteration: 40 (-60847.5726, 0.1364)
## Iteration: 50 (-60831.6494, 0.1328)
## Group probs = (0.6486, 0.2820, 0.0694)
##
## Outer iteration: 9
## Iteration: 1 (-60588.0676, 0.5188)
## Iteration: 10 (-60571.8022, 0.1348)
## Iteration: 20 (-60555.7841, 0.1304)
## Iteration: 30 (-60540.6183, 0.1267)
## Iteration: 40 (-60526.0851, 0.1235)
## Iteration: 50 (-60512.0768, 0.1206)
## Group probs = (0.6473, 0.2836, 0.0692)
##
## Outer iteration: 10
## Iteration: 1 (-60406.7444, 0.3291)
## Iteration: 10 (-60392.4346, 0.1231)
## Iteration: 20 (-60378.2478, 0.1193)
## Iteration: 30 (-60364.7517, 0.1161)
## Iteration: 40 (-60351.7694, 0.1134)
## Iteration: 50 (-60339.2158, 0.1109)
## Group probs = (0.6445, 0.2858, 0.0697)
##
## Outer iteration: 11
## Iteration: 1 (-59965.4588, 0.3141)
## Iteration: 10 (-59953.2050, 0.1134)
## Iteration: 20 (-59940.6101, 0.1102)
## Iteration: 30 (-59928.5276, 0.1074)
## Iteration: 40 (-59916.8514, 0.1050)
## Iteration: 50 (-59905.5239, 0.1028)
## Group probs = (0.6441, 0.2863, 0.0696)
##
## Outer iteration: 12
## Iteration: 1 (-59885.9241, 0.3817)
## Iteration: 10 (-59874.8631, 0.1035)
## Iteration: 20 (-59863.3821, 0.1013)
## Iteration: 30 (-59852.3166, 0.0993)
## Iteration: 40 (-59841.5866, 0.0974)
## Iteration: 50 (-59831.1483, 0.0957)
## Group probs = (0.6421, 0.2883, 0.0696)
##
## Outer iteration: 13
## Iteration: 1 (-59564.4901, 0.1963)
## Iteration: 10 (-59554.2913, 0.0966)
## Iteration: 20 (-59543.7643, 0.0946)
## Iteration: 30 (-59533.6157, 0.0928)
## Iteration: 40 (-59523.7677, 0.0911)
## Iteration: 50 (-59514.1803, 0.0896)
## Group probs = (0.6373, 0.2924, 0.0703)
##
## Outer iteration: 14
```

```
## Iteration: 1 (-58854.3364, 1.3870)
## Iteration: 10 (-58844.0131, 0.0945)
## Iteration: 20 (-58833.8307, 0.0913)
## Iteration: 30 (-58824.1837, 0.0887)
## Iteration: 40 (-58814.9178, 0.0865)
## Iteration: 50 (-58805.9561, 0.0847)
## Group probs = (0.6352, 0.2942, 0.0706)
##
## Outer iteration: 15
## Iteration: 1 (-58498.9535, 0.4612)
## Iteration: 10 (-58490.2790, 0.0854)
## Iteration: 20 (-58481.2182, 0.0838)
## Iteration: 30 (-58472.4731, 0.0822)
## Iteration: 40 (-58463.9838, 0.0808)
## Iteration: 50 (-58455.7164, 0.0795)
## Group probs = (0.6334, 0.2953, 0.0713)
##
## Outer iteration: 16
## Iteration: 1 (-58197.8268, 0.3392)
## Iteration: 10 (-58190.1449, 0.0798)
## Iteration: 20 (-58181.9457, 0.0784)
## Iteration: 30 (-58173.9506, 0.0772)
## Iteration: 40 (-58166.1359, 0.0761)
## Iteration: 50 (-58158.4863, 0.0750)
## Group probs = (0.6316, 0.2969, 0.0714)
##
## Outer iteration: 17
## Iteration: 1 (-57885.8120, 0.6103)
## Iteration: 10 (-57878.5657, 0.0761)
## Iteration: 20 (-57870.8624, 0.0750)
## Iteration: 30 (-57863.3507, 0.0740)
## Iteration: 40 (-57856.0031, 0.0731)
## Iteration: 50 (-57848.8050, 0.0722)
## Group probs = (0.6275, 0.3008, 0.0717)
##
## Outer iteration: 18
## Iteration: 1 (-57334.3137, 0.4902)
## Iteration: 10 (-57327.4598, 0.0722)
## Iteration: 20 (-57320.2218, 0.0712)
## Iteration: 30 (-57313.1788, 0.0702)
## Iteration: 40 (-57306.2953, 0.0694)
## Iteration: 50 (-57299.5530, 0.0685)
## Group probs = (0.6228, 0.3052, 0.0720)
##
## Outer iteration: 19
## Iteration: 1 (-56653.6839, 0.3485)
## Iteration: 10 (-56646.8165, 0.0699)
## Iteration: 20 (-56639.7452, 0.0688)
## Iteration: 30 (-56632.9262, 0.0678)
## Iteration: 40 (-56626.2963, 0.0669)
## Iteration: 50 (-56619.8250, 0.0661)
## Group probs = (0.6203, 0.3085, 0.0712)
##
## Outer iteration: 20
```

```
## Iteration: 1 (-56314.7370, 0.5313)
## Iteration: 10 (-56308.1829, 0.0669)
## Iteration: 20 (-56301.4718, 0.0662)
## Iteration: 30 (-56294.9887, 0.0654)
## Iteration: 40 (-56288.6748, 0.0646)
## Iteration: 50 (-56282.5033, 0.0640)
## Group probs = (0.6200, 0.3090, 0.0710)
##
## Outer iteration: 21
## Iteration: 1 (-56239.3716, 0.2063)
## Iteration: 10 (-56233.4439, 0.0651)
## Iteration: 20 (-56227.1148, 0.0644)
## Iteration: 30 (-56220.9425, 0.0638)
## Iteration: 40 (-56214.9028, 0.0631)
## Iteration: 50 (-56208.9817, 0.0626)
## Group probs = (0.6211, 0.3076, 0.0713)
##
## Outer iteration: 22
## Iteration: 1 (-56327.4456, 0.5429)
## Iteration: 10 (-56322.0077, 0.0608)
## Iteration: 20 (-56316.1331, 0.0599)
## Iteration: 30 (-56310.3681, 0.0593)
## Iteration: 40 (-56304.7003, 0.0588)
## Iteration: 50 (-56299.1224, 0.0583)
## Group probs = (0.6212, 0.3072, 0.0716)
##
## Outer iteration: 23
## Iteration: 1 (-56251.1663, 0.4017)
## Iteration: 10 (-56245.8290, 0.0595)
## Iteration: 20 (-56240.0898, 0.0589)
## Iteration: 30 (-56234.4558, 0.0584)
## Iteration: 40 (-56228.9126, 0.0579)
## Iteration: 50 (-56223.4528, 0.0574)
## Group probs = (0.6200, 0.3090, 0.0710)
##
## Outer iteration: 24
## Iteration: 1 (-56093.2528, 0.5614)
## Iteration: 10 (-56088.1590, 0.0561)
## Iteration: 20 (-56082.7223, 0.0562)
## Iteration: 30 (-56077.3845, 0.0559)
## Iteration: 40 (-56072.1284, 0.0556)
## Iteration: 50 (-56066.9463, 0.0553)
## Group probs = (0.6157, 0.3128, 0.0715)
##
## Outer iteration: 25
## Iteration: 1 (-55473.5534, 0.7009)
## Iteration: 10 (-55468.4496, 0.0579)
## Iteration: 20 (-55463.0441, 0.0571)
## Iteration: 30 (-55457.7565, 0.0565)
## Iteration: 40 (-55452.5618, 0.0560)
## Iteration: 50 (-55447.4479, 0.0555)
## Group probs = (0.6139, 0.3150, 0.0712)
##
## Outer iteration: 26
```

```
## Iteration: 1 (-55225.1643, 0.6119)
## Iteration: 10 (-55220.2599, 0.0528)
## Iteration: 20 (-55215.0730, 0.0526)
## Iteration: 30 (-55209.9982, 0.0523)
## Iteration: 40 (-55205.0118, 0.0519)
## Iteration: 50 (-55200.1018, 0.0516)
## Group probs = (0.6154, 0.3131, 0.0716)
##
## Outer iteration: 27
## Iteration: 1 (-55311.1046, 0.8782)
## Iteration: 10 (-55306.3217, 0.0536)
## Iteration: 20 (-55301.3371, 0.0527)
## Iteration: 30 (-55296.4303, 0.0521)
## Iteration: 40 (-55291.5877, 0.0517)
## Iteration: 50 (-55286.8029, 0.0513)
## Group probs = (0.6173, 0.3120, 0.0707)
##
## Outer iteration: 28
## Iteration: 1 (-55553.0928, 0.7384)
## Iteration: 10 (-55548.5267, 0.0526)
## Iteration: 20 (-55543.5962, 0.0520)
## Iteration: 30 (-55538.7295, 0.0514)
## Iteration: 40 (-55533.9166, 0.0509)
## Iteration: 50 (-55529.1535, 0.0505)
## Group probs = (0.6183, 0.3109, 0.0709)
##
## Outer iteration: 29
## Iteration: 1 (-55648.5253, 0.9515)
## Iteration: 10 (-55644.0127, 0.0536)
## Iteration: 20 (-55639.1771, 0.0522)
## Iteration: 30 (-55634.4093, 0.0512)
## Iteration: 40 (-55629.6963, 0.0506)
## Iteration: 50 (-55625.0323, 0.0500)
## Group probs = (0.6151, 0.3144, 0.0705)
##
## Outer iteration: 30
## Iteration: 1 (-55246.8412, 0.7091)
## Iteration: 10 (-55242.4897, 0.0479)
## Iteration: 20 (-55237.8591, 0.0480)
## Iteration: 30 (-55233.2887, 0.0479)
## Iteration: 40 (-55228.7664, 0.0477)
## Iteration: 50 (-55224.2871, 0.0475)
## Group probs = (0.6164, 0.3139, 0.0696)
##
## Outer iteration: 31
## Iteration: 1 (-55425.8586, 0.3068)
## Iteration: 10 (-55421.5927, 0.0476)
## Iteration: 20 (-55416.9693, 0.0476)
## Iteration: 30 (-55412.3964, 0.0473)
## Iteration: 40 (-55407.8671, 0.0470)
## Iteration: 50 (-55403.3783, 0.0467)
## Group probs = (0.6126, 0.3168, 0.0705)
##
## Outer iteration: 32
```

```
## Iteration: 1 (-54842.0528, 0.6134)
## Iteration: 10 (-54837.7344, 0.0462)
## Iteration: 20 (-54833.1700, 0.0459)
## Iteration: 30 (-54828.6845, 0.0456)
## Iteration: 40 (-54824.2538, 0.0454)
## Iteration: 50 (-54819.8696, 0.0451)
## Group probs = (0.6144, 0.3154, 0.0702)
##
## Outer iteration: 33
## Iteration: 1 (-55073.5552, 0.8978)
## Iteration: 10 (-55069.3561, 0.0488)
## Iteration: 20 (-55064.8463, 0.0474)
## Iteration: 30 (-55060.3916, 0.0465)
## Iteration: 40 (-55055.9821, 0.0459)
## Iteration: 50 (-55051.6137, 0.0454)
## Group probs = (0.6114, 0.3195, 0.0691)
##
## Outer iteration: 34
## Iteration: 1 (-54725.9200, 0.6551)
## Iteration: 10 (-54721.6767, 0.0436)
## Iteration: 20 (-54717.2292, 0.0436)
## Iteration: 30 (-54712.8528, 0.0435)
## Iteration: 40 (-54708.5281, 0.0433)
## Iteration: 50 (-54704.2473, 0.0430)
## Group probs = (0.6085, 0.3228, 0.0687)
##
## Outer iteration: 35
## Iteration: 1 (-54340.0467, 0.2797)
## Iteration: 10 (-54335.9947, 0.0424)
## Iteration: 20 (-54331.6767, 0.0425)
## Iteration: 30 (-54327.4254, 0.0423)
## Iteration: 40 (-54323.2250, 0.0421)
## Iteration: 50 (-54319.0688, 0.0418)
## Group probs = (0.6112, 0.3209, 0.0679)
##
## Outer iteration: 36
## Iteration: 1 (-54679.4092, 0.6976)
## Iteration: 10 (-54675.4504, 0.0420)
## Iteration: 20 (-54671.2067, 0.0416)
## Iteration: 30 (-54667.0201, 0.0414)
## Iteration: 40 (-54662.8794, 0.0411)
## Iteration: 50 (-54658.7802, 0.0409)
## Group probs = (0.6109, 0.3215, 0.0676)
##
## Outer iteration: 37
## Iteration: 1 (-54649.5937, 0.5287)
## Iteration: 10 (-54645.7982, 0.0407)
## Iteration: 20 (-54641.6720, 0.0405)
## Iteration: 30 (-54637.5920, 0.0402)
## Iteration: 40 (-54633.5526, 0.0399)
## Iteration: 50 (-54629.5516, 0.0396)
## Group probs = (0.6109, 0.3213, 0.0679)
##
## Outer iteration: 38
```

```
## Iteration: 1 (-54578.4656, 0.5201)
## Iteration: 10 (-54574.6165, 0.0430)
## Iteration: 20 (-54570.4905, 0.0420)
## Iteration: 30 (-54566.4221, 0.0412)
## Iteration: 40 (-54562.4019, 0.0405)
## Iteration: 50 (-54558.4253, 0.0400)
## Group probs = (0.6093, 0.3226, 0.0682)
##
## Outer iteration: 39
## Iteration: 1 (-54315.9489, 0.7475)
## Iteration: 10 (-54312.1808, 0.0385)
## Iteration: 20 (-54308.2005, 0.0380)
## Iteration: 30 (-54304.2841, 0.0377)
## Iteration: 40 (-54300.4137, 0.0375)
## Iteration: 50 (-54296.5833, 0.0372)
## Group probs = (0.6124, 0.3199, 0.0676)
##
## Outer iteration: 40
## Iteration: 1 (-54693.6761, 0.5084)
## Iteration: 10 (-54690.0357, 0.0379)
## Iteration: 20 (-54686.1143, 0.0375)
## Iteration: 30 (-54682.2416, 0.0372)
## Iteration: 40 (-54678.4117, 0.0369)
## Iteration: 50 (-54674.6219, 0.0366)
## Group probs = (0.6101, 0.3221, 0.0677)
##
## Outer iteration: 1
## Iteration: 1 (-70980.4679, Inf)
## Iteration: 10 (-60710.3375, 4.6387)
## Iteration: 20 (-59200.7188, 2.3052)
## Iteration: 30 (-58498.1651, 1.5580)
## Iteration: 40 (-58057.4562, 1.1884)
## Iteration: 50 (-57742.3951, 0.9664)
## Group probs = (0.6412, 0.2915, 0.0673)
##
## Outer iteration: 2
## Iteration: 1 (-60952.2284, 1.5571)
## Iteration: 10 (-60777.9176, 0.7132)
## Iteration: 20 (-60642.8750, 0.6055)
## Iteration: 30 (-60533.0260, 0.5330)
## Iteration: 40 (-60440.1667, 0.4781)
## Iteration: 50 (-60359.9143, 0.4345)
## Group probs = (0.6447, 0.2892, 0.0661)
##
## Outer iteration: 3
## Iteration: 1 (-60861.3842, 1.8996)
## Iteration: 10 (-60782.8170, 0.4075)
## Iteration: 20 (-60716.0615, 0.3717)
## Iteration: 30 (-60657.7839, 0.3443)
## Iteration: 40 (-60605.5145, 0.3215)
## Iteration: 50 (-60558.0338, 0.3019)
## Group probs = (0.6416, 0.2917, 0.0667)
##
## Outer iteration: 4
```

```
## Iteration: 1 (-60142.1794, 1.3882)
## Iteration: 10 (-60088.9832, 0.2969)
## Iteration: 20 (-60044.6712, 0.2747)
## Iteration: 30 (-60005.4018, 0.2586)
## Iteration: 40 (-59969.4574, 0.2454)
## Iteration: 50 (-59936.1243, 0.2339)
## Group probs = (0.6449, 0.2888, 0.0663)
##
## Outer iteration: 5
## Iteration: 1 (-60491.0155, 0.7832)
## Iteration: 10 (-60450.9836, 0.2350)
## Iteration: 20 (-60417.5409, 0.2198)
## Iteration: 30 (-60387.5161, 0.2090)
## Iteration: 40 (-60359.6926, 0.2003)
## Iteration: 50 (-60333.5860, 0.1927)
## Group probs = (0.6465, 0.2870, 0.0665)
##
## Outer iteration: 6
## Iteration: 1 (-60657.6414, 0.4769)
## Iteration: 10 (-60626.7027, 0.1966)
## Iteration: 20 (-60599.5566, 0.1863)
## Iteration: 30 (-60574.7826, 0.1788)
## Iteration: 40 (-60551.5964, 0.1727)
## Iteration: 50 (-60529.6637, 0.1673)
## Group probs = (0.6455, 0.2869, 0.0675)
##
## Outer iteration: 7
## Iteration: 1 (-60449.8581, 0.4226)
## Iteration: 10 (-60426.4376, 0.1702)
## Iteration: 20 (-60404.2777, 0.1632)
## Iteration: 30 (-60383.6559, 0.1578)
## Iteration: 40 (-60364.1349, 0.1531)
## Iteration: 50 (-60345.5062, 0.1490)
## Group probs = (0.6454, 0.2863, 0.0682)
##
## Outer iteration: 8
## Iteration: 1 (-60372.2823, 0.3645)
## Iteration: 10 (-60352.9749, 0.1514)
## Iteration: 20 (-60334.2203, 0.1462)
## Iteration: 30 (-60316.5983, 0.1420)
## Iteration: 40 (-60299.7979, 0.1382)
## Iteration: 50 (-60283.6665, 0.1348)
## Group probs = (0.6413, 0.2903, 0.0684)
##
## Outer iteration: 9
## Iteration: 1 (-59818.2336, 0.4666)
## Iteration: 10 (-59800.9593, 0.1383)
## Iteration: 20 (-59784.5784, 0.1331)
## Iteration: 30 (-59769.2064, 0.1291)
## Iteration: 40 (-59754.5314, 0.1258)
## Iteration: 50 (-59740.4091, 0.1228)
## Group probs = (0.6415, 0.2897, 0.0689)
##
## Outer iteration: 10
```

```

## Iteration: 1 (-59784.6402, 0.4517)
## Iteration: 10 (-59769.6997, 0.1269)
## Iteration: 20 (-59755.0941, 0.1225)
## Iteration: 30 (-59741.3009, 0.1189)
## Iteration: 40 (-59728.0833, 0.1160)
## Iteration: 50 (-59715.3264, 0.1134)
## Group probs = (0.6372, 0.2935, 0.0693)
##
## Outer iteration: 11
## Iteration: 1 (-59160.0131, 0.5851)
## Iteration: 10 (-59146.4199, 0.1181)
## Iteration: 20 (-59133.2696, 0.1134)
## Iteration: 30 (-59120.8887, 0.1098)
## Iteration: 40 (-59109.0486, 0.1069)
## Iteration: 50 (-59097.6364, 0.1045)
## Group probs = (0.6361, 0.2945, 0.0694)
##
## Outer iteration: 12
## Iteration: 1 (-59019.9451, 0.6402)
## Iteration: 10 (-59008.7205, 0.1056)
## Iteration: 20 (-58997.1991, 0.1032)
## Iteration: 30 (-58986.1668, 0.1010)
## Iteration: 40 (-58975.5157, 0.0989)
## Iteration: 50 (-58965.1852, 0.0970)
## Group probs = (0.6303, 0.2988, 0.0708)
##
## Outer iteration: 13
## Iteration: 1 (-58152.1957, 0.7994)
## Iteration: 10 (-58141.6743, 0.0999)
## Iteration: 20 (-58131.0564, 0.0971)
## Iteration: 30 (-58120.9229, 0.0949)
## Iteration: 40 (-58111.1548, 0.0930)
## Iteration: 50 (-58101.6886, 0.0913)
## Group probs = (0.6309, 0.2979, 0.0712)
##
## Outer iteration: 14
## Iteration: 1 (-58144.1062, 0.3260)
## Iteration: 10 (-58135.1597, 0.0913)
## Iteration: 20 (-58125.6804, 0.0896)
## Iteration: 30 (-58116.5060, 0.0881)
## Iteration: 40 (-58107.5894, 0.0867)
## Iteration: 50 (-58098.9007, 0.0854)
## Group probs = (0.6260, 0.3019, 0.0721)
##
## Outer iteration: 15
## Iteration: 1 (-57398.9176, 0.8001)
## Iteration: 10 (-57390.1814, 0.0874)
## Iteration: 20 (-57381.2701, 0.0859)
## Iteration: 30 (-57372.7271, 0.0845)
## Iteration: 40 (-57364.4713, 0.0832)
## Iteration: 50 (-57356.4574, 0.0821)
## Group probs = (0.6258, 0.3019, 0.0723)
##
## Outer iteration: 16

```

```
## Iteration: 1 (-57340.5385, 0.8102)
## Iteration: 10 (-57332.9882, 0.0825)
## Iteration: 20 (-57324.9648, 0.0814)
## Iteration: 30 (-57317.1655, 0.0803)
## Iteration: 40 (-57309.5607, 0.0794)
## Iteration: 50 (-57302.1316, 0.0785)
## Group probs = (0.6263, 0.3008, 0.0729)
##
## Outer iteration: 17
## Iteration: 1 (-57314.9414, 0.2068)
## Iteration: 10 (-57307.9096, 0.0794)
## Iteration: 20 (-57300.4638, 0.0784)
## Iteration: 30 (-57293.2117, 0.0775)
## Iteration: 40 (-57286.1252, 0.0766)
## Iteration: 50 (-57279.1889, 0.0758)
## Group probs = (0.6217, 0.3054, 0.0729)
##
## Outer iteration: 18
## Iteration: 1 (-56675.4662, 1.3486)
## Iteration: 10 (-56668.5568, 0.0747)
## Iteration: 20 (-56661.4404, 0.0737)
## Iteration: 30 (-56654.5614, 0.0729)
## Iteration: 40 (-56647.8687, 0.0722)
## Iteration: 50 (-56641.3371, 0.0715)
## Group probs = (0.6196, 0.3065, 0.0739)
##
## Outer iteration: 19
## Iteration: 1 (-56305.6407, 1.1408)
## Iteration: 10 (-56299.3223, 0.0723)
## Iteration: 20 (-56292.7426, 0.0711)
## Iteration: 30 (-56286.3522, 0.0703)
## Iteration: 40 (-56280.1202, 0.0697)
## Iteration: 50 (-56274.0286, 0.0691)
## Group probs = (0.6192, 0.3065, 0.0742)
##
## Outer iteration: 20
## Iteration: 1 (-56149.2765, 0.5248)
## Iteration: 10 (-56143.5906, 0.0672)
## Iteration: 20 (-56137.5452, 0.0667)
## Iteration: 30 (-56131.6539, 0.0662)
## Iteration: 40 (-56125.8943, 0.0657)
## Iteration: 50 (-56120.2528, 0.0652)
## Group probs = (0.6178, 0.3088, 0.0735)
##
## Outer iteration: 21
## Iteration: 1 (-55976.1248, 0.6568)
## Iteration: 10 (-55970.8294, 0.0635)
## Iteration: 20 (-55965.1948, 0.0632)
## Iteration: 30 (-55959.6878, 0.0628)
## Iteration: 40 (-55954.2917, 0.0625)
## Iteration: 50 (-55948.9968, 0.0621)
## Group probs = (0.6151, 0.3106, 0.0742)
##
## Outer iteration: 22
```

```
## Iteration: 1 (-55521.8949, 0.3838)
## Iteration: 10 (-55516.7846, 0.0637)
## Iteration: 20 (-55511.3512, 0.0631)
## Iteration: 30 (-55506.0504, 0.0626)
## Iteration: 40 (-55500.8635, 0.0623)
## Iteration: 50 (-55495.7790, 0.0619)
## Group probs = (0.6156, 0.3111, 0.0733)
##
## Outer iteration: 23
## Iteration: 1 (-55619.5796, 1.0149)
## Iteration: 10 (-55614.6476, 0.0611)
## Iteration: 20 (-55609.4968, 0.0607)
## Iteration: 30 (-55604.4639, 0.0604)
## Iteration: 40 (-55599.5283, 0.0600)
## Iteration: 50 (-55594.6805, 0.0597)
## Group probs = (0.6144, 0.3118, 0.0738)
##
## Outer iteration: 24
## Iteration: 1 (-55376.1415, 1.0115)
## Iteration: 10 (-55371.3223, 0.0576)
## Iteration: 20 (-55366.3344, 0.0574)
## Iteration: 30 (-55361.4872, 0.0573)
## Iteration: 40 (-55356.7511, 0.0571)
## Iteration: 50 (-55352.1114, 0.0569)
## Group probs = (0.6120, 0.3142, 0.0738)
##
## Outer iteration: 25
## Iteration: 1 (-55042.7935, 0.6521)
## Iteration: 10 (-55038.2566, 0.0589)
## Iteration: 20 (-55033.5091, 0.0585)
## Iteration: 30 (-55028.8756, 0.0582)
## Iteration: 40 (-55024.3329, 0.0578)
## Iteration: 50 (-55019.8709, 0.0576)
## Group probs = (0.6080, 0.3185, 0.0735)
##
## Outer iteration: 26
## Iteration: 1 (-54544.8228, 0.2318)
## Iteration: 10 (-54540.4344, 0.0562)
## Iteration: 20 (-54535.8250, 0.0561)
## Iteration: 30 (-54531.3334, 0.0560)
## Iteration: 40 (-54526.9369, 0.0559)
## Iteration: 50 (-54522.6242, 0.0558)
## Group probs = (0.6099, 0.3174, 0.0726)
##
## Outer iteration: 27
## Iteration: 1 (-54810.3336, 0.7255)
## Iteration: 10 (-54805.9604, 0.0585)
## Iteration: 20 (-54801.4349, 0.0577)
## Iteration: 30 (-54797.0193, 0.0571)
## Iteration: 40 (-54792.6878, 0.0566)
## Iteration: 50 (-54788.4295, 0.0563)
## Group probs = (0.6094, 0.3180, 0.0726)
##
## Outer iteration: 28
```

```
## Iteration: 1 (-54726.5558, 1.1537)
## Iteration: 10 (-54722.5552, 0.0526)
## Iteration: 20 (-54718.2604, 0.0526)
## Iteration: 30 (-54714.0398, 0.0525)
## Iteration: 40 (-54709.8843, 0.0524)
## Iteration: 50 (-54705.7894, 0.0523)
## Group probs = (0.6076, 0.3187, 0.0737)
##
## Outer iteration: 29
## Iteration: 1 (-54376.9964, 0.6652)
## Iteration: 10 (-54373.0020, 0.0489)
## Iteration: 20 (-54368.8285, 0.0490)
## Iteration: 30 (-54364.7611, 0.0491)
## Iteration: 40 (-54360.7729, 0.0492)
## Iteration: 50 (-54356.8525, 0.0492)
## Group probs = (0.6087, 0.3181, 0.0733)
##
## Outer iteration: 30
## Iteration: 1 (-54528.6229, 1.0367)
## Iteration: 10 (-54524.7298, 0.0517)
## Iteration: 20 (-54520.5735, 0.0514)
## Iteration: 30 (-54516.4988, 0.0511)
## Iteration: 40 (-54512.4914, 0.0509)
## Iteration: 50 (-54508.5442, 0.0507)
## Group probs = (0.6084, 0.3178, 0.0738)
##
## Outer iteration: 31
## Iteration: 1 (-54420.9697, 0.4518)
## Iteration: 10 (-54417.3289, 0.0473)
## Iteration: 20 (-54413.3970, 0.0473)
## Iteration: 30 (-54409.5297, 0.0473)
## Iteration: 40 (-54405.7190, 0.0472)
## Iteration: 50 (-54401.9601, 0.0471)
## Group probs = (0.6108, 0.3152, 0.0740)
##
## Outer iteration: 32
## Iteration: 1 (-54657.8206, 2.0068)
## Iteration: 10 (-54653.9756, 0.0531)
## Iteration: 20 (-54650.0024, 0.0514)
## Iteration: 30 (-54646.1147, 0.0504)
## Iteration: 40 (-54642.2901, 0.0498)
## Iteration: 50 (-54638.5193, 0.0493)
## Group probs = (0.6078, 0.3188, 0.0734)
##
## Outer iteration: 33
## Iteration: 1 (-54277.8601, 0.5376)
## Iteration: 10 (-54274.1568, 0.0474)
## Iteration: 20 (-54270.3110, 0.0478)
## Iteration: 30 (-54266.5412, 0.0478)
## Iteration: 40 (-54262.8278, 0.0477)
## Iteration: 50 (-54259.1631, 0.0476)
## Group probs = (0.6090, 0.3179, 0.0731)
##
## Outer iteration: 34
```

```
## Iteration: 1 (-54429.5439, 0.5229)
## Iteration: 10 (-54425.9655, 0.0453)
## Iteration: 20 (-54422.1290, 0.0449)
## Iteration: 30 (-54418.3588, 0.0448)
## Iteration: 40 (-54414.6421, 0.0446)
## Iteration: 50 (-54410.9724, 0.0444)
## Group probs = (0.6104, 0.3160, 0.0737)
##
## Outer iteration: 35
## Iteration: 1 (-54546.8574, 0.1647)
## Iteration: 10 (-54543.4626, 0.0446)
## Iteration: 20 (-54539.8261, 0.0438)
## Iteration: 30 (-54536.2424, 0.0434)
## Iteration: 40 (-54532.7018, 0.0431)
## Iteration: 50 (-54529.1995, 0.0428)
## Group probs = (0.6100, 0.3164, 0.0736)
##
## Outer iteration: 36
## Iteration: 1 (-54491.9966, 0.9045)
## Iteration: 10 (-54488.4676, 0.0462)
## Iteration: 20 (-54484.7968, 0.0451)
## Iteration: 30 (-54481.1991, 0.0444)
## Iteration: 40 (-54477.6527, 0.0439)
## Iteration: 50 (-54474.1490, 0.0436)
## Group probs = (0.6104, 0.3159, 0.0737)
##
## Outer iteration: 37
## Iteration: 1 (-54524.0742, 0.6613)
## Iteration: 10 (-54520.8460, 0.0420)
## Iteration: 20 (-54517.3818, 0.0419)
## Iteration: 30 (-54513.9552, 0.0417)
## Iteration: 40 (-54510.5593, 0.0415)
## Iteration: 50 (-54507.1914, 0.0412)
## Group probs = (0.6090, 0.3175, 0.0735)
##
## Outer iteration: 38
## Iteration: 1 (-54322.4207, 0.2794)
## Iteration: 10 (-54319.2182, 0.0429)
## Iteration: 20 (-54315.7663, 0.0422)
## Iteration: 30 (-54312.3558, 0.0417)
## Iteration: 40 (-54308.9769, 0.0413)
## Iteration: 50 (-54305.6258, 0.0410)
## Group probs = (0.6101, 0.3166, 0.0733)
##
## Outer iteration: 39
## Iteration: 1 (-54454.4574, 0.1861)
## Iteration: 10 (-54451.3200, 0.0403)
## Iteration: 20 (-54447.9251, 0.0400)
## Iteration: 30 (-54444.5708, 0.0397)
## Iteration: 40 (-54441.2487, 0.0394)
## Iteration: 50 (-54437.9546, 0.0392)
## Group probs = (0.6132, 0.3152, 0.0716)
##
## Outer iteration: 40
```

```

## Iteration: 1 (-54912.8495, 0.8988)
## Iteration: 10 (-54909.3897, 0.0425)
## Iteration: 20 (-54905.8954, 0.0417)
## Iteration: 30 (-54902.4715, 0.0411)
## Iteration: 40 (-54899.0907, 0.0405)
## Iteration: 50 (-54895.7438, 0.0400)
## Group probs = (0.6119, 0.3153, 0.0728)
##
## Outer iteration: 1
## Iteration: 1 (-71058.7247, Inf)
## Iteration: 10 (-60794.5357, 4.6355)
## Iteration: 20 (-59283.2811, 2.3001)
## Iteration: 30 (-58580.5739, 1.5533)
## Iteration: 40 (-58139.9231, 1.1846)
## Iteration: 50 (-57824.9908, 0.9633)
## Group probs = (0.6375, 0.2952, 0.0673)
##
## Outer iteration: 2
## Iteration: 1 (-60511.8561, 1.2453)
## Iteration: 10 (-60338.8377, 0.7100)
## Iteration: 20 (-60205.7874, 0.6020)
## Iteration: 30 (-60097.7219, 0.5296)
## Iteration: 40 (-60006.4177, 0.4749)
## Iteration: 50 (-59927.5400, 0.4315)
## Group probs = (0.6445, 0.2902, 0.0653)
##
## Outer iteration: 3
## Iteration: 1 (-60938.9446, 0.9969)
## Iteration: 10 (-60859.8781, 0.4074)
## Iteration: 20 (-60793.2777, 0.3713)
## Iteration: 30 (-60735.1808, 0.3438)
## Iteration: 40 (-60683.0933, 0.3209)
## Iteration: 50 (-60635.8066, 0.3012)
## Group probs = (0.6466, 0.2885, 0.0649)
##
## Outer iteration: 4
## Iteration: 1 (-60997.7724, 1.0996)
## Iteration: 10 (-60945.0781, 0.2964)
## Iteration: 20 (-60900.7929, 0.2745)
## Iteration: 30 (-60861.3377, 0.2587)
## Iteration: 40 (-60825.1248, 0.2456)
## Iteration: 50 (-60791.5073, 0.2341)
## Group probs = (0.6470, 0.2874, 0.0657)
##
## Outer iteration: 5
## Iteration: 1 (-60898.3244, 0.6019)
## Iteration: 10 (-60858.1041, 0.2382)
## Iteration: 20 (-60824.1456, 0.2224)
## Iteration: 30 (-60793.5803, 0.2113)
## Iteration: 40 (-60765.2220, 0.2024)
## Iteration: 50 (-60738.6021, 0.1946)
## Group probs = (0.6502, 0.2842, 0.0656)
##
## Outer iteration: 6

```

```
## Iteration: 1 (-61253.0618, 0.5644)
## Iteration: 10 (-61221.0328, 0.1996)
## Iteration: 20 (-61193.5601, 0.1886)
## Iteration: 30 (-61168.5039, 0.1807)
## Iteration: 40 (-61145.0421, 0.1742)
## Iteration: 50 (-61122.8452, 0.1686)
## Group probs = (0.6528, 0.2814, 0.0658)
##
## Outer iteration: 7
## Iteration: 1 (-61551.0606, 0.4861)
## Iteration: 10 (-61526.1123, 0.1724)
## Iteration: 20 (-61503.5601, 0.1644)
## Iteration: 30 (-61482.6748, 0.1585)
## Iteration: 40 (-61462.9352, 0.1536)
## Iteration: 50 (-61444.1168, 0.1492)
## Group probs = (0.6519, 0.2817, 0.0664)
##
## Outer iteration: 8
## Iteration: 1 (-61374.3093, 0.6057)
## Iteration: 10 (-61353.4864, 0.1549)
## Iteration: 20 (-61334.2368, 0.1481)
## Iteration: 30 (-61316.3041, 0.1430)
## Iteration: 40 (-61299.2738, 0.1388)
## Iteration: 50 (-61282.9615, 0.1352)
## Group probs = (0.6515, 0.2819, 0.0666)
##
## Outer iteration: 9
## Iteration: 1 (-61281.3496, 0.3580)
## Iteration: 10 (-61264.1032, 0.1388)
## Iteration: 20 (-61247.4504, 0.1339)
## Iteration: 30 (-61231.7170, 0.1301)
## Iteration: 40 (-61216.6480, 0.1268)
## Iteration: 50 (-61202.1268, 0.1239)
## Group probs = (0.6487, 0.2820, 0.0693)
##
## Outer iteration: 10
## Iteration: 1 (-60714.4933, 0.8405)
## Iteration: 10 (-60700.3041, 0.1260)
## Iteration: 20 (-60685.7927, 0.1225)
## Iteration: 30 (-60671.9086, 0.1194)
## Iteration: 40 (-60658.5196, 0.1166)
## Iteration: 50 (-60645.5529, 0.1141)
## Group probs = (0.6503, 0.2813, 0.0684)
##
## Outer iteration: 11
## Iteration: 1 (-60946.3299, 0.5062)
## Iteration: 10 (-60933.6477, 0.1178)
## Iteration: 20 (-60920.7189, 0.1142)
## Iteration: 30 (-60908.3114, 0.1112)
## Iteration: 40 (-60896.3098, 0.1086)
## Iteration: 50 (-60884.6551, 0.1063)
## Group probs = (0.6494, 0.2813, 0.0693)
##
## Outer iteration: 12
```

```
## Iteration: 1 (-60695.3391, 0.7530)
## Iteration: 10 (-60684.0213, 0.1085)
## Iteration: 20 (-60672.3176, 0.1055)
## Iteration: 30 (-60661.0496, 0.1029)
## Iteration: 40 (-60650.1315, 0.1006)
## Iteration: 50 (-60639.5151, 0.0985)
## Group probs = (0.6472, 0.2839, 0.0690)
##
## Outer iteration: 13
## Iteration: 1 (-60411.1261, 0.2919)
## Iteration: 10 (-60400.8322, 0.1006)
## Iteration: 20 (-60390.1529, 0.0981)
## Iteration: 30 (-60379.8609, 0.0957)
## Iteration: 40 (-60369.8806, 0.0936)
## Iteration: 50 (-60360.1698, 0.0918)
## Group probs = (0.6431, 0.2871, 0.0697)
##
## Outer iteration: 14
## Iteration: 1 (-59786.0396, 0.5901)
## Iteration: 10 (-59776.4563, 0.0950)
## Iteration: 20 (-59766.5736, 0.0922)
## Iteration: 30 (-59757.0916, 0.0898)
## Iteration: 40 (-59747.9228, 0.0878)
## Iteration: 50 (-59739.0183, 0.0860)
## Group probs = (0.6416, 0.2890, 0.0694)
##
## Outer iteration: 15
## Iteration: 1 (-59583.1156, 0.7062)
## Iteration: 10 (-59574.5551, 0.0865)
## Iteration: 20 (-59565.6085, 0.0847)
## Iteration: 30 (-59556.9530, 0.0830)
## Iteration: 40 (-59548.5383, 0.0815)
## Iteration: 50 (-59540.3363, 0.0801)
## Group probs = (0.6374, 0.2927, 0.0699)
##
## Outer iteration: 16
## Iteration: 1 (-58971.3636, 0.7631)
## Iteration: 10 (-58963.5118, 0.0809)
## Iteration: 20 (-58955.2989, 0.0792)
## Iteration: 30 (-58947.3547, 0.0778)
## Iteration: 40 (-58939.6306, 0.0765)
## Iteration: 50 (-58932.0991, 0.0753)
## Group probs = (0.6359, 0.2935, 0.0706)
##
## Outer iteration: 17
## Iteration: 1 (-58685.6070, 0.3459)
## Iteration: 10 (-58678.2778, 0.0772)
## Iteration: 20 (-58670.5632, 0.0755)
## Iteration: 30 (-58663.1077, 0.0739)
## Iteration: 40 (-58655.8652, 0.0725)
## Iteration: 50 (-58648.8081, 0.0712)
## Group probs = (0.6343, 0.2951, 0.0706)
##
## Outer iteration: 18
```

```
## Iteration: 1 (-58434.1286, 0.3378)
## Iteration: 10 (-58427.5281, 0.0717)
## Iteration: 20 (-58420.5028, 0.0703)
## Iteration: 30 (-58413.6802, 0.0690)
## Iteration: 40 (-58407.0315, 0.0679)
## Iteration: 50 (-58400.5383, 0.0669)
## Group probs = (0.6367, 0.2935, 0.0698)
##
## Outer iteration: 19
## Iteration: 1 (-58764.9102, 0.3554)
## Iteration: 10 (-58758.8702, 0.0664)
## Iteration: 20 (-58752.3863, 0.0656)
## Iteration: 30 (-58746.0553, 0.0648)
## Iteration: 40 (-58739.8579, 0.0640)
## Iteration: 50 (-58733.7826, 0.0633)
## Group probs = (0.6342, 0.2951, 0.0707)
##
## Outer iteration: 20
## Iteration: 1 (-58332.0996, 1.3022)
## Iteration: 10 (-58326.3374, 0.0647)
## Iteration: 20 (-58320.2083, 0.0638)
## Iteration: 30 (-58314.2270, 0.0629)
## Iteration: 40 (-58308.3727, 0.0622)
## Iteration: 50 (-58302.6335, 0.0616)
## Group probs = (0.6366, 0.2931, 0.0703)
##
## Outer iteration: 21
## Iteration: 1 (-58657.9478, 1.1672)
## Iteration: 10 (-58652.5139, 0.0608)
## Iteration: 20 (-58646.6773, 0.0604)
## Iteration: 30 (-58640.9672, 0.0599)
## Iteration: 40 (-58635.3683, 0.0594)
## Iteration: 50 (-58629.8709, 0.0588)
## Group probs = (0.6342, 0.2955, 0.0704)
##
## Outer iteration: 22
## Iteration: 1 (-58287.8263, 0.2111)
## Iteration: 10 (-58282.7418, 0.0586)
## Iteration: 20 (-58277.2861, 0.0580)
## Iteration: 30 (-58271.9440, 0.0575)
## Iteration: 40 (-58266.7024, 0.0569)
## Iteration: 50 (-58261.5538, 0.0564)
## Group probs = (0.6322, 0.2972, 0.0706)
##
## Outer iteration: 23
## Iteration: 1 (-57984.8669, 0.5646)
## Iteration: 10 (-57979.8367, 0.0566)
## Iteration: 20 (-57974.5350, 0.0560)
## Iteration: 30 (-57969.3579, 0.0554)
## Iteration: 40 (-57964.2836, 0.0550)
## Iteration: 50 (-57959.3019, 0.0545)
## Group probs = (0.6285, 0.3005, 0.0710)
##
## Outer iteration: 24
```

```
## Iteration: 1 (-57474.4132, 0.6395)
## Iteration: 10 (-57469.7176, 0.0559)
## Iteration: 20 (-57464.7012, 0.0553)
## Iteration: 30 (-57459.8018, 0.0548)
## Iteration: 40 (-57455.0034, 0.0544)
## Iteration: 50 (-57450.2963, 0.0540)
## Group probs = (0.6264, 0.3020, 0.0716)
##
## Outer iteration: 25
## Iteration: 1 (-57115.7364, 0.7528)
## Iteration: 10 (-57110.9914, 0.0521)
## Iteration: 20 (-57106.1204, 0.0513)
## Iteration: 30 (-57101.4023, 0.0508)
## Iteration: 40 (-57096.7998, 0.0504)
## Iteration: 50 (-57092.2966, 0.0500)
## Group probs = (0.6287, 0.3007, 0.0706)
##
## Outer iteration: 26
## Iteration: 1 (-57419.5327, 0.5473)
## Iteration: 10 (-57415.2632, 0.0493)
## Iteration: 20 (-57410.7179, 0.0492)
## Iteration: 30 (-57406.2791, 0.0488)
## Iteration: 40 (-57401.9302, 0.0485)
## Iteration: 50 (-57397.6626, 0.0482)
## Group probs = (0.6252, 0.3035, 0.0713)
##
## Outer iteration: 27
## Iteration: 1 (-56902.3448, 0.4146)
## Iteration: 10 (-56898.1348, 0.0488)
## Iteration: 20 (-56893.6990, 0.0484)
## Iteration: 30 (-56889.3832, 0.0480)
## Iteration: 40 (-56885.1654, 0.0476)
## Iteration: 50 (-56881.0337, 0.0473)
## Group probs = (0.6226, 0.3058, 0.0716)
##
## Outer iteration: 28
## Iteration: 1 (-56529.7944, 0.8133)
## Iteration: 10 (-56525.8327, 0.0476)
## Iteration: 20 (-56521.6336, 0.0470)
## Iteration: 30 (-56517.5375, 0.0466)
## Iteration: 40 (-56513.5269, 0.0463)
## Iteration: 50 (-56509.5928, 0.0460)
## Group probs = (0.6236, 0.3037, 0.0726)
##
## Outer iteration: 29
## Iteration: 1 (-56556.9314, 1.1794)
## Iteration: 10 (-56553.0583, 0.0450)
## Iteration: 20 (-56549.0671, 0.0443)
## Iteration: 30 (-56545.1765, 0.0440)
## Iteration: 40 (-56541.3638, 0.0437)
## Iteration: 50 (-56537.6191, 0.0434)
## Group probs = (0.6240, 0.3029, 0.0731)
##
## Outer iteration: 30
```

```
## Iteration: 1 (-56539.8019, 1.0707)
## Iteration: 10 (-56536.2362, 0.0452)
## Iteration: 20 (-56532.4688, 0.0445)
## Iteration: 30 (-56528.7737, 0.0441)
## Iteration: 40 (-56525.1394, 0.0437)
## Iteration: 50 (-56521.5603, 0.0434)
## Group probs = (0.6206, 0.3058, 0.0736)
##
## Outer iteration: 31
## Iteration: 1 (-56072.2925, 0.3433)
## Iteration: 10 (-56068.8682, 0.0419)
## Iteration: 20 (-56065.2727, 0.0414)
## Iteration: 30 (-56061.7599, 0.0410)
## Iteration: 40 (-56058.3113, 0.0408)
## Iteration: 50 (-56054.9188, 0.0406)
## Group probs = (0.6210, 0.3050, 0.0740)
##
## Outer iteration: 32
## Iteration: 1 (-56035.6804, 1.6010)
## Iteration: 10 (-56032.2663, 0.0461)
## Iteration: 20 (-56028.7112, 0.0451)
## Iteration: 30 (-56025.2393, 0.0444)
## Iteration: 40 (-56021.8283, 0.0438)
## Iteration: 50 (-56018.4697, 0.0434)
## Group probs = (0.6208, 0.3053, 0.0739)
##
## Outer iteration: 33
## Iteration: 1 (-56012.4234, 0.4361)
## Iteration: 10 (-56009.2399, 0.0447)
## Iteration: 20 (-56005.8526, 0.0440)
## Iteration: 30 (-56002.5294, 0.0436)
## Iteration: 40 (-55999.2589, 0.0433)
## Iteration: 50 (-55996.0359, 0.0430)
## Group probs = (0.6162, 0.3105, 0.0733)
##
## Outer iteration: 34
## Iteration: 1 (-55434.4253, 1.1184)
## Iteration: 10 (-55431.0086, 0.0435)
## Iteration: 20 (-55427.5692, 0.0440)
## Iteration: 30 (-55424.2287, 0.0438)
## Iteration: 40 (-55420.9581, 0.0436)
## Iteration: 50 (-55417.7456, 0.0434)
## Group probs = (0.6135, 0.3135, 0.0730)
##
## Outer iteration: 35
## Iteration: 1 (-55101.7994, 0.2545)
## Iteration: 10 (-55098.6476, 0.0426)
## Iteration: 20 (-55095.3656, 0.0424)
## Iteration: 30 (-55092.1660, 0.0423)
## Iteration: 40 (-55089.0291, 0.0421)
## Iteration: 50 (-55085.9454, 0.0420)
## Group probs = (0.6152, 0.3123, 0.0725)
##
## Outer iteration: 36
```

```

## Iteration: 1 (-55325.7304, 0.4349)
## Iteration: 10 (-55322.8363, 0.0395)
## Iteration: 20 (-55319.7244, 0.0394)
## Iteration: 30 (-55316.6611, 0.0393)
## Iteration: 40 (-55313.6403, 0.0392)
## Iteration: 50 (-55310.6593, 0.0391)
## Group probs = (0.6181, 0.3090, 0.0729)
##
## Outer iteration: 37
## Iteration: 1 (-55637.3703, 0.7209)
## Iteration: 10 (-55634.5328, 0.0385)
## Iteration: 20 (-55631.5443, 0.0383)
## Iteration: 30 (-55628.6067, 0.0383)
## Iteration: 40 (-55625.7087, 0.0383)
## Iteration: 50 (-55622.8462, 0.0382)
## Group probs = (0.6182, 0.3092, 0.0726)
##
## Outer iteration: 38
## Iteration: 1 (-55631.1803, 0.9400)
## Iteration: 10 (-55628.3768, 0.0366)
## Iteration: 20 (-55625.4108, 0.0370)
## Iteration: 30 (-55622.4951, 0.0371)
## Iteration: 40 (-55619.6203, 0.0372)
## Iteration: 50 (-55616.7826, 0.0372)
## Group probs = (0.6188, 0.3087, 0.0725)
##
## Outer iteration: 39
## Iteration: 1 (-55717.7313, 0.4617)
## Iteration: 10 (-55714.9659, 0.0398)
## Iteration: 20 (-55712.0927, 0.0393)
## Iteration: 30 (-55709.2781, 0.0389)
## Iteration: 40 (-55706.5054, 0.0385)
## Iteration: 50 (-55703.7686, 0.0382)
## Group probs = (0.6181, 0.3093, 0.0726)
##
## Outer iteration: 40
## Iteration: 1 (-55590.8154, 1.0696)
## Iteration: 10 (-55588.1704, 0.0397)
## Iteration: 20 (-55585.3491, 0.0390)
## Iteration: 30 (-55582.5689, 0.0386)
## Iteration: 40 (-55579.8223, 0.0384)
## Iteration: 50 (-55577.1068, 0.0381)
## Group probs = (0.6153, 0.3115, 0.0732)
##
## Outer iteration: 1
## Iteration: 1 (-70695.9790,   Inf)
## Iteration: 10 (-60426.2806, 4.6396)
## Iteration: 20 (-58916.2257, 2.3006)
## Iteration: 30 (-58214.5713, 1.5535)
## Iteration: 40 (-57774.8253, 1.1845)
## Iteration: 50 (-57460.7880, 0.9630)
## Group probs = (0.6430, 0.2890, 0.0680)
##
## Outer iteration: 2

```

```
## Iteration: 1 (-61311.5294, 1.4366)
## Iteration: 10 (-61137.1009, 0.7104)
## Iteration: 20 (-61003.0357, 0.6029)
## Iteration: 30 (-60894.0474, 0.5306)
## Iteration: 40 (-60801.9746, 0.4759)
## Iteration: 50 (-60722.4556, 0.4324)
## Group probs = (0.6474, 0.2864, 0.0662)
##
## Outer iteration: 3
## Iteration: 1 (-61403.3240, 1.2276)
## Iteration: 10 (-61324.4380, 0.4075)
## Iteration: 20 (-61257.7413, 0.3711)
## Iteration: 30 (-61199.5267, 0.3435)
## Iteration: 40 (-61147.3335, 0.3207)
## Iteration: 50 (-61099.9480, 0.3010)
## Group probs = (0.6512, 0.2824, 0.0664)
##
## Outer iteration: 4
## Iteration: 1 (-61700.8128, 0.4870)
## Iteration: 10 (-61649.9388, 0.2947)
## Iteration: 20 (-61605.6003, 0.2743)
## Iteration: 30 (-61565.7363, 0.2590)
## Iteration: 40 (-61529.0326, 0.2461)
## Iteration: 50 (-61494.9053, 0.2348)
## Group probs = (0.6539, 0.2794, 0.0667)
##
## Outer iteration: 5
## Iteration: 1 (-61945.3425, 0.6580)
## Iteration: 10 (-61906.3916, 0.2357)
## Iteration: 20 (-61872.3872, 0.2215)
## Iteration: 30 (-61841.4808, 0.2113)
## Iteration: 40 (-61812.6970, 0.2027)
## Iteration: 50 (-61785.6286, 0.1952)
## Group probs = (0.6544, 0.2777, 0.0680)
##
## Outer iteration: 6
## Iteration: 1 (-61831.5736, 0.9299)
## Iteration: 10 (-61801.2212, 0.1971)
## Iteration: 20 (-61774.0049, 0.1871)
## Iteration: 30 (-61749.0196, 0.1797)
## Iteration: 40 (-61725.5705, 0.1735)
## Iteration: 50 (-61703.3526, 0.1681)
## Group probs = (0.6544, 0.2768, 0.0688)
##
## Outer iteration: 7
## Iteration: 1 (-61731.2104, 0.6411)
## Iteration: 10 (-61706.3693, 0.1735)
## Iteration: 20 (-61683.6480, 0.1652)
## Iteration: 30 (-61662.6515, 0.1591)
## Iteration: 40 (-61642.8255, 0.1540)
## Iteration: 50 (-61623.9219, 0.1496)
## Group probs = (0.6521, 0.2789, 0.0689)
##
## Outer iteration: 8
```

```
## Iteration: 1 (-61397.6911, 0.7568)
## Iteration: 10 (-61376.7205, 0.1557)
## Iteration: 20 (-61357.5459, 0.1481)
## Iteration: 30 (-61339.7321, 0.1427)
## Iteration: 40 (-61322.8270, 0.1384)
## Iteration: 50 (-61306.6301, 0.1347)
## Group probs = (0.6499, 0.2812, 0.0690)
##
## Outer iteration: 9
## Iteration: 1 (-61109.7351, 0.4835)
## Iteration: 10 (-61091.7166, 0.1416)
## Iteration: 20 (-61074.8397, 0.1351)
## Iteration: 30 (-61059.0802, 0.1304)
## Iteration: 40 (-61044.0737, 0.1267)
## Iteration: 50 (-61029.6520, 0.1235)
## Group probs = (0.6483, 0.2809, 0.0708)
##
## Outer iteration: 10
## Iteration: 1 (-60756.3862, 0.5851)
## Iteration: 10 (-60741.8795, 0.1266)
## Iteration: 20 (-60727.2504, 0.1225)
## Iteration: 30 (-60713.3310, 0.1191)
## Iteration: 40 (-60699.9434, 0.1162)
## Iteration: 50 (-60686.9936, 0.1136)
## Group probs = (0.6449, 0.2849, 0.0702)
##
## Outer iteration: 11
## Iteration: 1 (-60305.2193, 0.7491)
## Iteration: 10 (-60291.4707, 0.1178)
## Iteration: 20 (-60278.2765, 0.1134)
## Iteration: 30 (-60265.7746, 0.1102)
## Iteration: 40 (-60253.7583, 0.1076)
## Iteration: 50 (-60242.1352, 0.1053)
## Group probs = (0.6407, 0.2879, 0.0714)
##
## Outer iteration: 12
## Iteration: 1 (-59628.4831, 0.3513)
## Iteration: 10 (-59616.3715, 0.1096)
## Iteration: 20 (-59604.3220, 0.1058)
## Iteration: 30 (-59592.8945, 0.1028)
## Iteration: 40 (-59581.9234, 0.1003)
## Iteration: 50 (-59571.3229, 0.0981)
## Group probs = (0.6351, 0.2933, 0.0716)
##
## Outer iteration: 13
## Iteration: 1 (-58858.1382, 0.4525)
## Iteration: 10 (-58847.3131, 0.1013)
## Iteration: 20 (-58836.4286, 0.0980)
## Iteration: 30 (-58826.0828, 0.0954)
## Iteration: 40 (-58816.1417, 0.0931)
## Iteration: 50 (-58806.5330, 0.0912)
## Group probs = (0.6335, 0.2936, 0.0729)
##
## Outer iteration: 14
```

```
## Iteration: 1 (-58539.7280, 0.5989)
## Iteration: 10 (-58530.4465, 0.0925)
## Iteration: 20 (-58520.7160, 0.0904)
## Iteration: 30 (-58511.3505, 0.0884)
## Iteration: 40 (-58502.2852, 0.0867)
## Iteration: 50 (-58493.4798, 0.0851)
## Group probs = (0.6284, 0.2987, 0.0729)
##
## Outer iteration: 15
## Iteration: 1 (-57837.8824, 1.0819)
## Iteration: 10 (-57828.6921, 0.0893)
## Iteration: 20 (-57819.5099, 0.0862)
## Iteration: 30 (-57810.7901, 0.0838)
## Iteration: 40 (-57802.4143, 0.0818)
## Iteration: 50 (-57794.3199, 0.0801)
## Group probs = (0.6259, 0.3002, 0.0738)
##
## Outer iteration: 16
## Iteration: 1 (-57417.8445, 0.7313)
## Iteration: 10 (-57409.7728, 0.0827)
## Iteration: 20 (-57401.4091, 0.0805)
## Iteration: 30 (-57393.4088, 0.0786)
## Iteration: 40 (-57385.6974, 0.0768)
## Iteration: 50 (-57378.2289, 0.0753)
## Group probs = (0.6272, 0.2993, 0.0735)
##
## Outer iteration: 17
## Iteration: 1 (-57532.5612, 0.3488)
## Iteration: 10 (-57525.5436, 0.0750)
## Iteration: 20 (-57518.1095, 0.0737)
## Iteration: 30 (-57510.8978, 0.0725)
## Iteration: 40 (-57503.8765, 0.0714)
## Iteration: 50 (-57497.0259, 0.0704)
## Group probs = (0.6280, 0.2978, 0.0742)
##
## Outer iteration: 18
## Iteration: 1 (-57541.6238, 0.3520)
## Iteration: 10 (-57535.2303, 0.0701)
## Iteration: 20 (-57528.3642, 0.0690)
## Iteration: 30 (-57521.6695, 0.0681)
## Iteration: 40 (-57515.1286, 0.0672)
## Iteration: 50 (-57508.7291, 0.0663)
## Group probs = (0.6247, 0.3006, 0.0746)
##
## Outer iteration: 19
## Iteration: 1 (-57064.6478, 0.5489)
## Iteration: 10 (-57058.7008, 0.0673)
## Iteration: 20 (-57052.3836, 0.0662)
## Iteration: 30 (-57046.2163, 0.0653)
## Iteration: 40 (-57040.1799, 0.0646)
## Iteration: 50 (-57034.2636, 0.0638)
## Group probs = (0.6214, 0.3042, 0.0744)
##
## Outer iteration: 20
```

```
## Iteration: 1 (-56624.7222, 0.6623)
## Iteration: 10 (-56618.9551, 0.0644)
## Iteration: 20 (-56612.9477, 0.0634)
## Iteration: 30 (-56607.1045, 0.0626)
## Iteration: 40 (-56601.3959, 0.0619)
## Iteration: 50 (-56595.8068, 0.0612)
## Group probs = (0.6182, 0.3064, 0.0755)
##
## Outer iteration: 21
## Iteration: 1 (-56082.1144, 1.0689)
## Iteration: 10 (-56076.5273, 0.0627)
## Iteration: 20 (-56070.7877, 0.0618)
## Iteration: 30 (-56065.2222, 0.0611)
## Iteration: 40 (-56059.7965, 0.0605)
## Iteration: 50 (-56054.4924, 0.0599)
## Group probs = (0.6229, 0.3019, 0.0752)
##
## Outer iteration: 22
## Iteration: 1 (-56688.0374, 0.1992)
## Iteration: 10 (-56682.9749, 0.0580)
## Iteration: 20 (-56677.6461, 0.0575)
## Iteration: 30 (-56672.4494, 0.0570)
## Iteration: 40 (-56667.3588, 0.0566)
## Iteration: 50 (-56662.3621, 0.0561)
## Group probs = (0.6205, 0.3050, 0.0745)
##
## Outer iteration: 23
## Iteration: 1 (-56375.4567, 1.0656)
## Iteration: 10 (-56370.5129, 0.0556)
## Iteration: 20 (-56365.4219, 0.0552)
## Iteration: 30 (-56360.4647, 0.0547)
## Iteration: 40 (-56355.6112, 0.0542)
## Iteration: 50 (-56350.8488, 0.0537)
## Group probs = (0.6150, 0.3104, 0.0746)
##
## Outer iteration: 24
## Iteration: 1 (-55649.2808, 0.2736)
## Iteration: 10 (-55644.5919, 0.0545)
## Iteration: 20 (-55639.7313, 0.0537)
## Iteration: 30 (-55635.0153, 0.0532)
## Iteration: 40 (-55630.4094, 0.0527)
## Iteration: 50 (-55625.8970, 0.0523)
## Group probs = (0.6161, 0.3092, 0.0747)
##
## Outer iteration: 25
## Iteration: 1 (-55717.1900, 0.5029)
## Iteration: 10 (-55712.8582, 0.0540)
## Iteration: 20 (-55708.2009, 0.0535)
## Iteration: 30 (-55703.6362, 0.0530)
## Iteration: 40 (-55699.1521, 0.0526)
## Iteration: 50 (-55694.7422, 0.0523)
## Group probs = (0.6139, 0.3109, 0.0752)
##
## Outer iteration: 26
```

```
## Iteration: 1 (-55353.9764, 0.6937)
## Iteration: 10 (-55349.6544, 0.0542)
## Iteration: 20 (-55345.0481, 0.0538)
## Iteration: 30 (-55340.5466, 0.0534)
## Iteration: 40 (-55336.1330, 0.0531)
## Iteration: 50 (-55331.7981, 0.0528)
## Group probs = (0.6124, 0.3129, 0.0747)
##
## Outer iteration: 27
## Iteration: 1 (-55194.1726, 0.7952)
## Iteration: 10 (-55190.0388, 0.0527)
## Iteration: 20 (-55185.6321, 0.0524)
## Iteration: 30 (-55181.3195, 0.0521)
## Iteration: 40 (-55177.0849, 0.0518)
## Iteration: 50 (-55172.9205, 0.0515)
## Group probs = (0.6099, 0.3151, 0.0750)
##
## Outer iteration: 28
## Iteration: 1 (-54810.7420, 0.1147)
## Iteration: 10 (-54806.8473, 0.0511)
## Iteration: 20 (-54802.6499, 0.0509)
## Iteration: 30 (-54798.5269, 0.0507)
## Iteration: 40 (-54794.4701, 0.0505)
## Iteration: 50 (-54790.4743, 0.0503)
## Group probs = (0.6100, 0.3147, 0.0753)
##
## Outer iteration: 29
## Iteration: 1 (-54778.0250, 0.6831)
## Iteration: 10 (-54774.2740, 0.0515)
## Iteration: 20 (-54770.2007, 0.0507)
## Iteration: 30 (-54766.1898, 0.0502)
## Iteration: 40 (-54762.2355, 0.0498)
## Iteration: 50 (-54758.3346, 0.0495)
## Group probs = (0.6126, 0.3124, 0.0750)
##
## Outer iteration: 30
## Iteration: 1 (-55065.7881, 0.7662)
## Iteration: 10 (-55062.0324, 0.0482)
## Iteration: 20 (-55058.0240, 0.0481)
## Iteration: 30 (-55054.0859, 0.0479)
## Iteration: 40 (-55050.2072, 0.0478)
## Iteration: 50 (-55046.3820, 0.0476)
## Group probs = (0.6088, 0.3150, 0.0761)
##
## Outer iteration: 31
## Iteration: 1 (-54515.4959, 1.0782)
## Iteration: 10 (-54511.8785, 0.0490)
## Iteration: 20 (-54508.0998, 0.0480)
## Iteration: 30 (-54504.3847, 0.0475)
## Iteration: 40 (-54500.7197, 0.0471)
## Iteration: 50 (-54497.0998, 0.0469)
## Group probs = (0.6087, 0.3161, 0.0751)
##
## Outer iteration: 32
```

```
## Iteration: 1 (-54522.8322, 0.3871)
## Iteration: 10 (-54519.4111, 0.0438)
## Iteration: 20 (-54515.7950, 0.0441)
## Iteration: 30 (-54512.2409, 0.0441)
## Iteration: 40 (-54508.7350, 0.0441)
## Iteration: 50 (-54505.2718, 0.0440)
## Group probs = (0.6043, 0.3200, 0.0757)
##
## Outer iteration: 33
## Iteration: 1 (-53915.2904, 0.4376)
## Iteration: 10 (-53911.7481, 0.0454)
## Iteration: 20 (-53908.0564, 0.0452)
## Iteration: 30 (-53904.4514, 0.0450)
## Iteration: 40 (-53900.9082, 0.0448)
## Iteration: 50 (-53897.4161, 0.0447)
## Group probs = (0.6031, 0.3202, 0.0767)
##
## Outer iteration: 34
## Iteration: 1 (-53660.2122, 1.2028)
## Iteration: 10 (-53656.8361, 0.0449)
## Iteration: 20 (-53653.2936, 0.0441)
## Iteration: 30 (-53649.8145, 0.0438)
## Iteration: 40 (-53646.3852, 0.0436)
## Iteration: 50 (-53642.9992, 0.0434)
## Group probs = (0.6032, 0.3204, 0.0764)
##
## Outer iteration: 35
## Iteration: 1 (-53687.1004, 0.3159)
## Iteration: 10 (-53683.9518, 0.0461)
## Iteration: 20 (-53680.5449, 0.0459)
## Iteration: 30 (-53677.1804, 0.0455)
## Iteration: 40 (-53673.8509, 0.0452)
## Iteration: 50 (-53670.5536, 0.0448)
## Group probs = (0.6073, 0.3164, 0.0763)
##
## Outer iteration: 36
## Iteration: 1 (-54146.9536, 0.4238)
## Iteration: 10 (-54143.7522, 0.0439)
## Iteration: 20 (-54140.3380, 0.0434)
## Iteration: 30 (-54136.9775, 0.0431)
## Iteration: 40 (-54133.6587, 0.0428)
## Iteration: 50 (-54130.3755, 0.0425)
## Group probs = (0.6082, 0.3161, 0.0757)
##
## Outer iteration: 37
## Iteration: 1 (-54269.2512, 0.9013)
## Iteration: 10 (-54266.2183, 0.0397)
## Iteration: 20 (-54262.9410, 0.0395)
## Iteration: 30 (-54259.7007, 0.0394)
## Iteration: 40 (-54256.4903, 0.0393)
## Iteration: 50 (-54253.3068, 0.0392)
## Group probs = (0.6080, 0.3173, 0.0747)
##
## Outer iteration: 38
```

```

## Iteration: 1 (-54293.7063, 0.4977)
## Iteration: 10 (-54290.7295, 0.0375)
## Iteration: 20 (-54287.5387, 0.0379)
## Iteration: 30 (-54284.3849, 0.0381)
## Iteration: 40 (-54281.2607, 0.0381)
## Iteration: 50 (-54278.1627, 0.0380)
## Group probs = (0.6081, 0.3166, 0.0753)
##
## Outer iteration: 39
## Iteration: 1 (-54249.3264, 0.7206)
## Iteration: 10 (-54246.2865, 0.0416)
## Iteration: 20 (-54243.1257, 0.0406)
## Iteration: 30 (-54240.0065, 0.0400)
## Iteration: 40 (-54236.9165, 0.0396)
## Iteration: 50 (-54233.8517, 0.0393)
## Group probs = (0.6085, 0.3160, 0.0755)
##
## Outer iteration: 40
## Iteration: 1 (-54246.8702, 0.5449)
## Iteration: 10 (-54243.9467, 0.0400)
## Iteration: 20 (-54240.8117, 0.0391)
## Iteration: 30 (-54237.7135, 0.0386)
## Iteration: 40 (-54234.6428, 0.0383)
## Iteration: 50 (-54231.5959, 0.0380)
## Group probs = (0.6117, 0.3130, 0.0754)
##
## CCES_2014
## Outer iteration: 1
## Iteration: 1 (-466319.9462, Inf)
## Iteration: 10 (-419638.8486, 7.9448)
## Iteration: 20 (-413466.6678, 3.9310)
## Iteration: 30 (-410584.1572, 2.6782)
## Iteration: 40 (-408764.5775, 2.0611)
## Iteration: 50 (-407459.1802, 1.6881)
## Group probs = (0.7599, 0.1799, 0.0602)
##
## Outer iteration: 2
## Iteration: 1 (-420484.5154, 1.7087)
## Iteration: 10 (-419758.9615, 1.3117)
## Iteration: 20 (-419118.1639, 1.1335)
## Iteration: 30 (-418586.6068, 1.0048)
## Iteration: 40 (-418133.9675, 0.9047)
## Iteration: 50 (-417741.3529, 0.8240)
## Group probs = (0.7664, 0.1761, 0.0574)
##
## Outer iteration: 3
## Iteration: 1 (-422685.9203, 0.8719)
## Iteration: 10 (-422358.9352, 0.7676)
## Iteration: 20 (-422035.1162, 0.7132)
## Iteration: 30 (-421744.7100, 0.6646)
## Iteration: 40 (-421482.0756, 0.6219)
## Iteration: 50 (-421242.8804, 0.5844)
## Group probs = (0.7712, 0.1725, 0.0563)
##

```

```
## Outer iteration: 4
## Iteration: 1 (-424586.4515, 1.0240)
## Iteration: 10 (-424377.5638, 0.5603)
## Iteration: 20 (-424164.1661, 0.5321)
## Iteration: 30 (-423967.0744, 0.5053)
## Iteration: 40 (-423784.1605, 0.4808)
## Iteration: 50 (-423613.7124, 0.4585)
## Group probs = (0.7718, 0.1720, 0.0563)
##
## Outer iteration: 5
## Iteration: 1 (-423663.2134, 0.6145)
## Iteration: 10 (-423513.7343, 0.4442)
## Iteration: 20 (-423358.2629, 0.4258)
## Iteration: 30 (-423212.3186, 0.4084)
## Iteration: 40 (-423074.8567, 0.3923)
## Iteration: 50 (-422945.0220, 0.3774)
## Group probs = (0.7719, 0.1713, 0.0567)
##
## Outer iteration: 6
## Iteration: 1 (-422669.1702, 1.0223)
## Iteration: 10 (-422552.0461, 0.3695)
## Iteration: 20 (-422429.7045, 0.3565)
## Iteration: 30 (-422313.8473, 0.3442)
## Iteration: 40 (-422203.7306, 0.3327)
## Iteration: 50 (-422098.8095, 0.3220)
## Group probs = (0.7714, 0.1707, 0.0579)
##
## Outer iteration: 7
## Iteration: 1 (-421121.4682, 0.8379)
## Iteration: 10 (-421027.6666, 0.3154)
## Iteration: 20 (-420928.8034, 0.3059)
## Iteration: 30 (-420834.4311, 0.2968)
## Iteration: 40 (-420744.1039, 0.2882)
## Iteration: 50 (-420657.4826, 0.2801)
## Group probs = (0.7702, 0.1721, 0.0578)
##
## Outer iteration: 8
## Iteration: 1 (-419797.6473, 0.3757)
## Iteration: 10 (-419720.4101, 0.2754)
## Iteration: 20 (-419638.1885, 0.2680)
## Iteration: 30 (-419559.1828, 0.2609)
## Iteration: 40 (-419483.1112, 0.2543)
## Iteration: 50 (-419409.7573, 0.2480)
## Group probs = (0.7695, 0.1727, 0.0578)
##
## Outer iteration: 9
## Iteration: 1 (-418746.0417, 0.5760)
## Iteration: 10 (-418679.4356, 0.2454)
## Iteration: 20 (-418608.4477, 0.2395)
## Iteration: 30 (-418540.0102, 0.2338)
## Iteration: 40 (-418473.8701, 0.2284)
## Iteration: 50 (-418409.8529, 0.2233)
## Group probs = (0.7694, 0.1730, 0.0577)
##
```

```
## Outer iteration: 10
## Iteration: 1 (-418117.4949, 0.2418)
## Iteration: 10 (-418060.0453, 0.2203)
## Iteration: 20 (-417998.3050, 0.2158)
## Iteration: 30 (-417938.4781, 0.2113)
## Iteration: 40 (-417880.4238, 0.2070)
## Iteration: 50 (-417824.0316, 0.2028)
## Group probs = (0.7687, 0.1746, 0.0567)
##
## Outer iteration: 11
## Iteration: 1 (-417563.2531, 0.6104)
## Iteration: 10 (-417513.0503, 0.1999)
## Iteration: 20 (-417458.9610, 0.1959)
## Iteration: 30 (-417406.3279, 0.1922)
## Iteration: 40 (-417355.0600, 0.1887)
## Iteration: 50 (-417305.0876, 0.1852)
## Group probs = (0.7673, 0.1752, 0.0575)
##
## Outer iteration: 12
## Iteration: 1 (-415835.4761, 0.8051)
## Iteration: 10 (-415791.0126, 0.1834)
## Iteration: 20 (-415743.0819, 0.1798)
## Iteration: 30 (-415696.3676, 0.1765)
## Iteration: 40 (-415650.7866, 0.1734)
## Iteration: 50 (-415606.2780, 0.1704)
## Group probs = (0.7644, 0.1774, 0.0582)
##
## Outer iteration: 13
## Iteration: 1 (-413262.0754, 0.4866)
## Iteration: 10 (-413222.0355, 0.1690)
## Iteration: 20 (-413178.8055, 0.1661)
## Iteration: 30 (-413136.5796, 0.1633)
## Iteration: 40 (-413095.2952, 0.1607)
## Iteration: 50 (-413054.9068, 0.1582)
## Group probs = (0.7652, 0.1768, 0.0580)
##
## Outer iteration: 14
## Iteration: 1 (-413603.2999, 0.2182)
## Iteration: 10 (-413567.4904, 0.1557)
## Iteration: 20 (-413528.6272, 0.1536)
## Iteration: 30 (-413490.5834, 0.1514)
## Iteration: 40 (-413453.3149, 0.1493)
## Iteration: 50 (-413416.7888, 0.1471)
## Group probs = (0.7617, 0.1800, 0.0583)
##
## Outer iteration: 15
## Iteration: 1 (-410720.1958, 0.3497)
## Iteration: 10 (-410686.9915, 0.1465)
## Iteration: 20 (-410651.4294, 0.1437)
## Iteration: 30 (-410616.6809, 0.1414)
## Iteration: 40 (-410582.6337, 0.1393)
## Iteration: 50 (-410549.2362, 0.1374)
## Group probs = (0.7630, 0.1793, 0.0577)
##
```

```
## Outer iteration: 16
## Iteration: 1 (-411641.6035, 0.3358)
## Iteration: 10 (-411611.0544, 0.1367)
## Iteration: 20 (-411578.0230, 0.1349)
## Iteration: 30 (-411545.6731, 0.1332)
## Iteration: 40 (-411513.9375, 0.1314)
## Iteration: 50 (-411482.7764, 0.1297)
## Group probs = (0.7585, 0.1830, 0.0585)
##
## Outer iteration: 17
## Iteration: 1 (-407858.1267, 0.4955)
## Iteration: 10 (-407829.7081, 0.1298)
## Iteration: 20 (-407799.1100, 0.1276)
## Iteration: 30 (-407769.1132, 0.1258)
## Iteration: 40 (-407739.6472, 0.1242)
## Iteration: 50 (-407710.6779, 0.1227)
## Group probs = (0.7562, 0.1853, 0.0585)
##
## Outer iteration: 18
## Iteration: 1 (-406085.4507, 0.6029)
## Iteration: 10 (-406059.2612, 0.1220)
## Iteration: 20 (-406030.9628, 0.1202)
## Iteration: 30 (-406003.1734, 0.1186)
## Iteration: 40 (-405975.8427, 0.1172)
## Iteration: 50 (-405948.9433, 0.1159)
## Group probs = (0.7548, 0.1868, 0.0584)
##
## Outer iteration: 19
## Iteration: 1 (-404913.7589, 0.2993)
## Iteration: 10 (-404889.4028, 0.1157)
## Iteration: 20 (-404863.0952, 0.1140)
## Iteration: 30 (-404837.2397, 0.1126)
## Iteration: 40 (-404811.7837, 0.1113)
## Iteration: 50 (-404786.7039, 0.1101)
## Group probs = (0.7559, 0.1859, 0.0582)
##
## Outer iteration: 20
## Iteration: 1 (-405599.5771, 0.1481)
## Iteration: 10 (-405576.8938, 0.1093)
## Iteration: 20 (-405552.1533, 0.1083)
## Iteration: 30 (-405527.7666, 0.1072)
## Iteration: 40 (-405503.7161, 0.1061)
## Iteration: 50 (-405479.9906, 0.1051)
## Group probs = (0.7567, 0.1845, 0.0589)
##
## Outer iteration: 21
## Iteration: 1 (-405797.8611, 0.7825)
## Iteration: 10 (-405776.5628, 0.1036)
## Iteration: 20 (-405753.7595, 0.1026)
## Iteration: 30 (-405731.3272, 0.1016)
## Iteration: 40 (-405709.2103, 0.1007)
## Iteration: 50 (-405687.3886, 0.0997)
## Group probs = (0.7577, 0.1832, 0.0591)
##
```

```

## Outer iteration: 22
## Iteration: 1 (-406431.9552, 0.4567)
## Iteration: 10 (-406412.0168, 0.0990)
## Iteration: 20 (-406390.3894, 0.0983)
## Iteration: 30 (-406369.0698, 0.0974)
## Iteration: 40 (-406348.0298, 0.0965)
## Iteration: 50 (-406327.2566, 0.0956)
## Group probs = (0.7564, 0.1844, 0.0592)
##
## Outer iteration: 23
## Iteration: 1 (-405223.9595, 0.2149)
## Iteration: 10 (-405205.2334, 0.0951)
## Iteration: 20 (-405184.8058, 0.0942)
## Iteration: 30 (-405164.6595, 0.0932)
## Iteration: 40 (-405144.7712, 0.0924)
## Iteration: 50 (-405125.1284, 0.0915)
## Group probs = (0.7566, 0.1846, 0.0588)
##
## Outer iteration: 24
## Iteration: 1 (-405397.0106, 0.4359)
## Iteration: 10 (-405379.0006, 0.0913)
## Iteration: 20 (-405359.5028, 0.0905)
## Iteration: 30 (-405340.3089, 0.0896)
## Iteration: 40 (-405321.3783, 0.0888)
## Iteration: 50 (-405302.6903, 0.0879)
## Group probs = (0.7560, 0.1847, 0.0593)
##
## Outer iteration: 25
## Iteration: 1 (-404776.0507, 0.1835)
## Iteration: 10 (-404759.0816, 0.0877)
## Iteration: 20 (-404740.6275, 0.0869)
## Iteration: 30 (-404722.4296, 0.0861)
## Iteration: 40 (-404704.4615, 0.0853)
## Iteration: 50 (-404686.7089, 0.0846)
## Group probs = (0.7543, 0.1862, 0.0596)
##
## Outer iteration: 26
## Iteration: 1 (-403312.1015, 0.3810)
## Iteration: 10 (-403295.5697, 0.0850)
## Iteration: 20 (-403277.7508, 0.0840)
## Iteration: 30 (-403260.2048, 0.0831)
## Iteration: 40 (-403242.8837, 0.0824)
## Iteration: 50 (-403225.7665, 0.0817)
## Group probs = (0.7566, 0.1851, 0.0583)
##
## Outer iteration: 27
## Iteration: 1 (-405391.2608, 0.6562)
## Iteration: 10 (-405375.4699, 0.0811)
## Iteration: 20 (-405358.5612, 0.0805)
## Iteration: 30 (-405341.9101, 0.0799)
## Iteration: 40 (-405325.4624, 0.0792)
## Iteration: 50 (-405309.1972, 0.0786)
## Group probs = (0.7541, 0.1870, 0.0589)
##

```

```
## Outer iteration: 28
## Iteration: 1 (-403209.5670, 0.5881)
## Iteration: 10 (-403194.3210, 0.0791)
## Iteration: 20 (-403177.9382, 0.0785)
## Iteration: 30 (-403161.7898, 0.0778)
## Iteration: 40 (-403145.8343, 0.0772)
## Iteration: 50 (-403130.0547, 0.0766)
## Group probs = (0.7529, 0.1877, 0.0594)
##
## Outer iteration: 29
## Iteration: 1 (-402149.1277, 0.3199)
## Iteration: 10 (-402135.1331, 0.0755)
## Iteration: 20 (-402119.8752, 0.0749)
## Iteration: 30 (-402104.7817, 0.0743)
## Iteration: 40 (-402089.8347, 0.0737)
## Iteration: 50 (-402075.0273, 0.0732)
## Group probs = (0.7528, 0.1874, 0.0598)
##
## Outer iteration: 30
## Iteration: 1 (-401803.5964, 0.3211)
## Iteration: 10 (-401790.4135, 0.0727)
## Iteration: 20 (-401775.9684, 0.0722)
## Iteration: 30 (-401761.6655, 0.0717)
## Iteration: 40 (-401747.4953, 0.0712)
## Iteration: 50 (-401733.4529, 0.0707)
## Group probs = (0.7552, 0.1856, 0.0593)
##
## Outer iteration: 31
## Iteration: 1 (-403684.9782, 0.1867)
## Iteration: 10 (-403672.1468, 0.0704)
## Iteration: 20 (-403658.1226, 0.0701)
## Iteration: 30 (-403644.2351, 0.0696)
## Iteration: 40 (-403630.4718, 0.0692)
## Iteration: 50 (-403616.8276, 0.0687)
## Group probs = (0.7552, 0.1861, 0.0588)
##
## Outer iteration: 32
## Iteration: 1 (-403851.5054, 0.5112)
## Iteration: 10 (-403838.8809, 0.0688)
## Iteration: 20 (-403825.2046, 0.0682)
## Iteration: 30 (-403811.6734, 0.0677)
## Iteration: 40 (-403798.2633, 0.0673)
## Iteration: 50 (-403784.9663, 0.0668)
## Group probs = (0.7531, 0.1877, 0.0592)
##
## Outer iteration: 33
## Iteration: 1 (-402134.3394, 0.4097)
## Iteration: 10 (-402122.3052, 0.0668)
## Iteration: 20 (-402109.2144, 0.0662)
## Iteration: 30 (-402096.2590, 0.0657)
## Iteration: 40 (-402083.4214, 0.0652)
## Iteration: 50 (-402070.6940, 0.0648)
## Group probs = (0.7516, 0.1885, 0.0599)
##
```

```
## Outer iteration: 34
## Iteration: 1 (-400902.9437, 0.2777)
## Iteration: 10 (-400891.1166, 0.0650)
## Iteration: 20 (-400878.2602, 0.0645)
## Iteration: 30 (-400865.5618, 0.0641)
## Iteration: 40 (-400852.9955, 0.0637)
## Iteration: 50 (-400840.5488, 0.0633)
## Group probs = (0.7534, 0.1873, 0.0593)
##
## Outer iteration: 35
## Iteration: 1 (-402214.9358, 0.2921)
## Iteration: 10 (-402203.5257, 0.0625)
## Iteration: 20 (-402191.3936, 0.0621)
## Iteration: 30 (-402179.4321, 0.0617)
## Iteration: 40 (-402167.5939, 0.0613)
## Iteration: 50 (-402155.8626, 0.0609)
## Group probs = (0.7522, 0.1885, 0.0593)
##
## Outer iteration: 36
## Iteration: 1 (-401433.9561, 0.4691)
## Iteration: 10 (-401423.1580, 0.0610)
## Iteration: 20 (-401411.5107, 0.0605)
## Iteration: 30 (-401399.9822, 0.0601)
## Iteration: 40 (-401388.5528, 0.0598)
## Iteration: 50 (-401377.2148, 0.0594)
## Group probs = (0.7509, 0.1889, 0.0602)
##
## Outer iteration: 37
## Iteration: 1 (-400255.4504, 0.2669)
## Iteration: 10 (-400244.8721, 0.0597)
## Iteration: 20 (-400233.4302, 0.0593)
## Iteration: 30 (-400222.1095, 0.0589)
## Iteration: 40 (-400210.8880, 0.0586)
## Iteration: 50 (-400199.7571, 0.0582)
## Group probs = (0.7517, 0.1875, 0.0608)
##
## Outer iteration: 38
## Iteration: 1 (-400468.1318, 0.6091)
## Iteration: 10 (-400458.1244, 0.0573)
## Iteration: 20 (-400447.3541, 0.0570)
## Iteration: 30 (-400436.6830, 0.0567)
## Iteration: 40 (-400426.0930, 0.0564)
## Iteration: 50 (-400415.5786, 0.0560)
## Group probs = (0.7473, 0.1914, 0.0613)
##
## Outer iteration: 39
## Iteration: 1 (-397010.8859, 0.3299)
## Iteration: 10 (-396999.8505, 0.0577)
## Iteration: 20 (-396988.5398, 0.0571)
## Iteration: 30 (-396977.5320, 0.0566)
## Iteration: 40 (-396966.7137, 0.0561)
## Iteration: 50 (-396956.0406, 0.0557)
## Group probs = (0.7477, 0.1918, 0.0604)
##
```

```

## Outer iteration: 40
## Iteration: 1 (-397623.3287, 0.9336)
## Iteration: 10 (-397613.2992, 0.0556)
## Iteration: 20 (-397602.7760, 0.0552)
## Iteration: 30 (-397592.3917, 0.0548)
## Iteration: 40 (-397582.1053, 0.0545)
## Iteration: 50 (-397571.9038, 0.0542)
## Group probs = (0.7454, 0.1936, 0.0610)
##
## Outer iteration: 1
## Iteration: 1 (-466072.4163, Inf)
## Iteration: 10 (-419311.0588, 7.9341)
## Iteration: 20 (-413136.0098, 3.9274)
## Iteration: 30 (-410251.7520, 2.6768)
## Iteration: 40 (-408432.5194, 2.0596)
## Iteration: 50 (-407129.0308, 1.6859)
## Group probs = (0.7551, 0.1826, 0.0623)
##
## Outer iteration: 2
## Iteration: 1 (-415760.1858, 1.8448)
## Iteration: 10 (-415038.7572, 1.3078)
## Iteration: 20 (-414401.6949, 1.1295)
## Iteration: 30 (-413873.0402, 1.0012)
## Iteration: 40 (-413422.7912, 0.9015)
## Iteration: 50 (-413032.2210, 0.8210)
## Group probs = (0.7602, 0.1799, 0.0599)
##
## Outer iteration: 3
## Iteration: 1 (-416555.8351, 1.0897)
## Iteration: 10 (-416231.1496, 0.7664)
## Iteration: 20 (-415909.8397, 0.7107)
## Iteration: 30 (-415621.7446, 0.6617)
## Iteration: 40 (-415361.2194, 0.6190)
## Iteration: 50 (-415123.9453, 0.5814)
## Group probs = (0.7645, 0.1773, 0.0581)
##
## Outer iteration: 4
## Iteration: 1 (-418392.0516, 0.6222)
## Iteration: 10 (-418186.7576, 0.5549)
## Iteration: 20 (-417976.9088, 0.5270)
## Iteration: 30 (-417783.0352, 0.5006)
## Iteration: 40 (-417603.0672, 0.4764)
## Iteration: 50 (-417435.3335, 0.4544)
## Group probs = (0.7658, 0.1760, 0.0582)
##
## Outer iteration: 5
## Iteration: 1 (-417935.3689, 0.9943)
## Iteration: 10 (-417786.4026, 0.4418)
## Iteration: 20 (-417631.8312, 0.4237)
## Iteration: 30 (-417486.7539, 0.4065)
## Iteration: 40 (-417350.1053, 0.3904)
## Iteration: 50 (-417221.0279, 0.3756)
## Group probs = (0.7644, 0.1766, 0.0590)
##

```

```

## Outer iteration: 6
## Iteration: 1 (-415670.9081, 0.8520)
## Iteration: 10 (-415555.7597, 0.3672)
## Iteration: 20 (-415435.4371, 0.3538)
## Iteration: 30 (-415321.4674, 0.3415)
## Iteration: 40 (-415213.1208, 0.3300)
## Iteration: 50 (-415109.8644, 0.3194)
## Group probs = (0.7663, 0.1753, 0.0583)
##
## Outer iteration: 7
## Iteration: 1 (-416477.4515, 0.6097)
## Iteration: 10 (-416384.5822, 0.3131)
## Iteration: 20 (-416286.6672, 0.3040)
## Iteration: 30 (-416193.1887, 0.2951)
## Iteration: 40 (-416103.6954, 0.2866)
## Iteration: 50 (-416017.8503, 0.2786)
## Group probs = (0.7679, 0.1740, 0.0581)
##
## Outer iteration: 8
## Iteration: 1 (-417107.6625, 0.4269)
## Iteration: 10 (-417030.6720, 0.2737)
## Iteration: 20 (-416948.7595, 0.2669)
## Iteration: 30 (-416870.0054, 0.2601)
## Iteration: 40 (-416794.1580, 0.2535)
## Iteration: 50 (-416721.0116, 0.2473)
## Group probs = (0.7672, 0.1748, 0.0580)
##
## Outer iteration: 9
## Iteration: 1 (-416121.6276, 0.3313)
## Iteration: 10 (-416055.2364, 0.2442)
## Iteration: 20 (-415984.4113, 0.2385)
## Iteration: 30 (-415916.0726, 0.2331)
## Iteration: 40 (-415849.9923, 0.2278)
## Iteration: 50 (-415786.0094, 0.2228)
## Group probs = (0.7660, 0.1756, 0.0584)
##
## Outer iteration: 10
## Iteration: 1 (-414561.3406, 0.3922)
## Iteration: 10 (-414504.4098, 0.2197)
## Iteration: 20 (-414443.1723, 0.2150)
## Iteration: 30 (-414383.8094, 0.2105)
## Iteration: 40 (-414326.1911, 0.2062)
## Iteration: 50 (-414270.2124, 0.2021)
## Group probs = (0.7630, 0.1782, 0.0588)
##
## Outer iteration: 11
## Iteration: 1 (-411847.4515, 0.5955)
## Iteration: 10 (-411795.9654, 0.2012)
## Iteration: 20 (-411741.2669, 0.1967)
## Iteration: 30 (-411688.3532, 0.1926)
## Iteration: 40 (-411636.9787, 0.1888)
## Iteration: 50 (-411587.0043, 0.1853)
## Group probs = (0.7633, 0.1781, 0.0587)
##

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```

## Outer iteration: 12
## Iteration: 1 (-411723.5953, 0.3579)
## Iteration: 10 (-411679.2523, 0.1828)
## Iteration: 20 (-411631.3109, 0.1796)
## Iteration: 30 (-411584.5638, 0.1765)
## Iteration: 40 (-411538.9404, 0.1734)
## Iteration: 50 (-411494.3854, 0.1705)
## Group probs = (0.7599, 0.1809, 0.0591)
##
## Outer iteration: 13
## Iteration: 1 (-408832.8988, 0.3103)
## Iteration: 10 (-408792.8767, 0.1692)
## Iteration: 20 (-408749.5594, 0.1663)
## Iteration: 30 (-408707.2442, 0.1635)
## Iteration: 40 (-408665.8688, 0.1608)
## Iteration: 50 (-408625.3873, 0.1583)
## Group probs = (0.7587, 0.1818, 0.0594)
##
## Outer iteration: 14
## Iteration: 1 (-407589.6567, 0.2605)
## Iteration: 10 (-407553.4429, 0.1569)
## Iteration: 20 (-407514.1452, 0.1543)
## Iteration: 30 (-407475.7013, 0.1519)
## Iteration: 40 (-407438.0567, 0.1497)
## Iteration: 50 (-407401.1710, 0.1475)
## Group probs = (0.7594, 0.1825, 0.0581)
##
## Outer iteration: 15
## Iteration: 1 (-408123.9803, 0.6011)
## Iteration: 10 (-408091.0420, 0.1458)
## Iteration: 20 (-408055.6678, 0.1433)
## Iteration: 30 (-408021.0194, 0.1412)
## Iteration: 40 (-407987.0256, 0.1392)
## Iteration: 50 (-407953.6525, 0.1373)
## Group probs = (0.7574, 0.1842, 0.0584)
##
## Outer iteration: 16
## Iteration: 1 (-406297.3859, 0.3606)
## Iteration: 10 (-406266.9781, 0.1367)
## Iteration: 20 (-406234.0009, 0.1348)
## Iteration: 30 (-406201.6652, 0.1330)
## Iteration: 40 (-406169.9195, 0.1313)
## Iteration: 50 (-406138.7318, 0.1296)
## Group probs = (0.7575, 0.1838, 0.0587)
##
## Outer iteration: 17
## Iteration: 1 (-406117.2457, 0.2714)
## Iteration: 10 (-406089.2333, 0.1286)
## Iteration: 20 (-406058.7566, 0.1271)
## Iteration: 30 (-406028.8159, 0.1256)
## Iteration: 40 (-405999.3798, 0.1241)
## Iteration: 50 (-405970.4270, 0.1226)
## Group probs = (0.7590, 0.1824, 0.0586)
##

```



```
## Outer iteration: 24
## Iteration: 1 (-400459.9835, 0.3337)
## Iteration: 10 (-400442.2109, 0.0915)
## Iteration: 20 (-400422.9665, 0.0904)
## Iteration: 30 (-400403.9609, 0.0894)
## Iteration: 40 (-400385.1728, 0.0886)
## Iteration: 50 (-400366.5941, 0.0878)
## Group probs = (0.7527, 0.1874, 0.0599)
##
## Outer iteration: 25
## Iteration: 1 (-401428.4050, 0.3580)
## Iteration: 10 (-401411.3136, 0.0876)
## Iteration: 20 (-401392.7803, 0.0870)
## Iteration: 30 (-401374.4902, 0.0863)
## Iteration: 40 (-401356.4180, 0.0855)
## Iteration: 50 (-401338.5512, 0.0848)
## Group probs = (0.7514, 0.1879, 0.0607)
##
## Outer iteration: 26
## Iteration: 1 (-400249.2226, 0.3566)
## Iteration: 10 (-400233.1243, 0.0839)
## Iteration: 20 (-400215.6497, 0.0832)
## Iteration: 30 (-400198.3897, 0.0825)
## Iteration: 40 (-400181.3189, 0.0818)
## Iteration: 50 (-400164.4276, 0.0812)
## Group probs = (0.7521, 0.1876, 0.0603)
##
## Outer iteration: 27
## Iteration: 1 (-400825.5870, 0.3153)
## Iteration: 10 (-400810.0111, 0.0813)
## Iteration: 20 (-400793.0428, 0.0807)
## Iteration: 30 (-400776.2897, 0.0801)
## Iteration: 40 (-400759.7254, 0.0795)
## Iteration: 50 (-400743.3375, 0.0788)
## Group probs = (0.7520, 0.1875, 0.0605)
##
## Outer iteration: 28
## Iteration: 1 (-400668.2631, 0.3287)
## Iteration: 10 (-400653.4414, 0.0787)
## Iteration: 20 (-400637.2791, 0.0780)
## Iteration: 30 (-400621.2945, 0.0774)
## Iteration: 40 (-400605.4732, 0.0768)
## Iteration: 50 (-400589.8081, 0.0763)
## Group probs = (0.7489, 0.1904, 0.0608)
##
## Outer iteration: 29
## Iteration: 1 (-398159.6801, 0.6568)
## Iteration: 10 (-398145.5492, 0.0757)
## Iteration: 20 (-398130.2649, 0.0749)
## Iteration: 30 (-398115.1465, 0.0743)
## Iteration: 40 (-398100.1733, 0.0737)
## Iteration: 50 (-398085.3378, 0.0732)
## Group probs = (0.7483, 0.1910, 0.0607)
##
```

```
## Outer iteration: 30
## Iteration: 1 (-397765.6281, 0.1402)
## Iteration: 10 (-397752.0882, 0.0733)
## Iteration: 20 (-397737.2816, 0.0727)
## Iteration: 30 (-397722.6269, 0.0721)
## Iteration: 40 (-397708.1103, 0.0716)
## Iteration: 50 (-397693.7249, 0.0711)
## Group probs = (0.7466, 0.1927, 0.0607)
##
## Outer iteration: 31
## Iteration: 1 (-396476.1090, 0.4699)
## Iteration: 10 (-396463.1110, 0.0710)
## Iteration: 20 (-396448.9642, 0.0703)
## Iteration: 30 (-396434.9630, 0.0697)
## Iteration: 40 (-396421.0889, 0.0692)
## Iteration: 50 (-396407.3347, 0.0687)
## Group probs = (0.7482, 0.1912, 0.0607)
##
## Outer iteration: 32
## Iteration: 1 (-397661.2352, 0.4558)
## Iteration: 10 (-397648.3703, 0.0687)
## Iteration: 20 (-397634.4676, 0.0684)
## Iteration: 30 (-397620.7182, 0.0681)
## Iteration: 40 (-397607.0982, 0.0677)
## Iteration: 50 (-397593.5987, 0.0672)
## Group probs = (0.7480, 0.1908, 0.0613)
##
## Outer iteration: 33
## Iteration: 1 (-397393.9320, 0.4415)
## Iteration: 10 (-397381.6209, 0.0670)
## Iteration: 20 (-397368.2494, 0.0666)
## Iteration: 30 (-397355.0355, 0.0662)
## Iteration: 40 (-397341.9556, 0.0657)
## Iteration: 50 (-397328.9987, 0.0653)
## Group probs = (0.7473, 0.1914, 0.0613)
##
## Outer iteration: 34
## Iteration: 1 (-396790.2890, 0.1734)
## Iteration: 10 (-396778.7080, 0.0651)
## Iteration: 20 (-396766.0196, 0.0645)
## Iteration: 30 (-396753.4468, 0.0640)
## Iteration: 40 (-396740.9791, 0.0636)
## Iteration: 50 (-396728.6115, 0.0632)
## Group probs = (0.7463, 0.1919, 0.0618)
##
## Outer iteration: 35
## Iteration: 1 (-395901.2144, 0.2162)
## Iteration: 10 (-395890.1780, 0.0628)
## Iteration: 20 (-395878.0885, 0.0623)
## Iteration: 30 (-395866.1002, 0.0619)
## Iteration: 40 (-395854.2045, 0.0615)
## Iteration: 50 (-395842.3981, 0.0611)
## Group probs = (0.7472, 0.1912, 0.0615)
##
```

```

## Outer iteration: 36
## Iteration: 1 (-396665.0281, 0.2603)
## Iteration: 10 (-396654.1387, 0.0615)
## Iteration: 20 (-396642.2884, 0.0611)
## Iteration: 30 (-396630.5468, 0.0607)
## Iteration: 40 (-396618.8975, 0.0603)
## Iteration: 50 (-396607.3350, 0.0600)
## Group probs = (0.7494, 0.1892, 0.0614)
##
## Outer iteration: 37
## Iteration: 1 (-398299.6713, 0.3320)
## Iteration: 10 (-398288.8636, 0.0594)
## Iteration: 20 (-398277.2375, 0.0593)
## Iteration: 30 (-398265.7211, 0.0591)
## Iteration: 40 (-398254.2960, 0.0588)
## Iteration: 50 (-398242.9564, 0.0585)
## Group probs = (0.7480, 0.1895, 0.0625)
##
## Outer iteration: 38
## Iteration: 1 (-396917.4720, 0.4839)
## Iteration: 10 (-396907.2938, 0.0581)
## Iteration: 20 (-396896.2132, 0.0577)
## Iteration: 30 (-396885.2288, 0.0573)
## Iteration: 40 (-396874.3278, 0.0570)
## Iteration: 50 (-396863.5054, 0.0566)
## Group probs = (0.7477, 0.1900, 0.0623)
##
## Outer iteration: 39
## Iteration: 1 (-396688.4678, 0.2299)
## Iteration: 10 (-396678.4640, 0.0567)
## Iteration: 20 (-396667.5803, 0.0564)
## Iteration: 30 (-396656.7935, 0.0561)
## Iteration: 40 (-396646.0899, 0.0558)
## Iteration: 50 (-396635.4643, 0.0556)
## Group probs = (0.7480, 0.1899, 0.0621)
##
## Outer iteration: 40
## Iteration: 1 (-396846.4029, 0.2036)
## Iteration: 10 (-396836.4904, 0.0560)
## Iteration: 20 (-396825.9959, 0.0555)
## Iteration: 30 (-396815.6215, 0.0550)
## Iteration: 40 (-396805.3344, 0.0546)
## Iteration: 50 (-396795.1238, 0.0543)
## Group probs = (0.7455, 0.1913, 0.0632)
##
## Outer iteration: 1
## Iteration: 1 (-466936.2429, Inf)
## Iteration: 10 (-420147.9684, 7.9318)
## Iteration: 20 (-413977.8960, 3.9232)
## Iteration: 30 (-411097.0003, 2.6745)
## Iteration: 40 (-409278.1825, 2.0591)
## Iteration: 50 (-407973.6392, 1.6866)
## Group probs = (0.7628, 0.1775, 0.0598)
##

```



```
## Outer iteration: 8
## Iteration: 1 (-419016.0985, 0.5710)
## Iteration: 10 (-418939.8710, 0.2733)
## Iteration: 20 (-418858.5283, 0.2660)
## Iteration: 30 (-418780.2502, 0.2591)
## Iteration: 40 (-418704.8077, 0.2526)
## Iteration: 50 (-418632.0117, 0.2464)
## Group probs = (0.7702, 0.1741, 0.0557)
##
## Outer iteration: 9
## Iteration: 1 (-418785.0610, 0.3880)
## Iteration: 10 (-418719.6534, 0.2426)
## Iteration: 20 (-418649.5963, 0.2372)
## Iteration: 30 (-418581.9102, 0.2319)
## Iteration: 40 (-418516.4206, 0.2267)
## Iteration: 50 (-418452.9878, 0.2217)
## Group probs = (0.7723, 0.1721, 0.0556)
##
## Outer iteration: 10
## Iteration: 1 (-420016.5340, 0.3812)
## Iteration: 10 (-419959.7566, 0.2184)
## Iteration: 20 (-419898.7225, 0.2143)
## Iteration: 30 (-419839.5360, 0.2100)
## Iteration: 40 (-419782.0781, 0.2057)
## Iteration: 50 (-419726.2508, 0.2016)
## Group probs = (0.7722, 0.1722, 0.0556)
##
## Outer iteration: 11
## Iteration: 1 (-419449.1341, 0.2516)
## Iteration: 10 (-419399.8083, 0.1980)
## Iteration: 20 (-419346.5155, 0.1943)
## Iteration: 30 (-419294.6647, 0.1907)
## Iteration: 40 (-419244.1757, 0.1872)
## Iteration: 50 (-419194.9796, 0.1838)
## Group probs = (0.7686, 0.1749, 0.0565)
##
## Outer iteration: 12
## Iteration: 1 (-416191.6823, 0.2872)
## Iteration: 10 (-416146.6911, 0.1833)
## Iteration: 20 (-416098.6008, 0.1794)
## Iteration: 30 (-416051.8688, 0.1759)
## Iteration: 40 (-416006.3363, 0.1728)
## Iteration: 50 (-415961.9133, 0.1698)
## Group probs = (0.7647, 0.1783, 0.0570)
##
## Outer iteration: 13
## Iteration: 1 (-412847.2950, 0.2647)
## Iteration: 10 (-412806.5359, 0.1691)
## Iteration: 20 (-412763.0559, 0.1657)
## Iteration: 30 (-412720.8193, 0.1626)
## Iteration: 40 (-412679.6413, 0.1599)
## Iteration: 50 (-412639.4238, 0.1573)
## Group probs = (0.7651, 0.1785, 0.0564)
##
```

```
## Outer iteration: 14
## Iteration: 1 (-413042.6626, 0.2903)
## Iteration: 10 (-413006.3827, 0.1559)
## Iteration: 20 (-412967.0300, 0.1536)
## Iteration: 30 (-412928.5452, 0.1513)
## Iteration: 40 (-412890.8704, 0.1491)
## Iteration: 50 (-412853.9628, 0.1470)
## Group probs = (0.7658, 0.1777, 0.0565)
##
## Outer iteration: 15
## Iteration: 1 (-413294.6867, 0.3092)
## Iteration: 10 (-413262.0091, 0.1454)
## Iteration: 20 (-413226.5140, 0.1434)
## Iteration: 30 (-413191.7189, 0.1414)
## Iteration: 40 (-413157.5867, 0.1394)
## Iteration: 50 (-413124.0900, 0.1375)
## Group probs = (0.7670, 0.1767, 0.0564)
##
## Outer iteration: 16
## Iteration: 1 (-413962.7465, 0.2055)
## Iteration: 10 (-413932.6311, 0.1358)
## Iteration: 20 (-413899.8907, 0.1343)
## Iteration: 30 (-413867.7466, 0.1326)
## Iteration: 40 (-413836.1682, 0.1309)
## Iteration: 50 (-413805.1336, 0.1293)
## Group probs = (0.7642, 0.1798, 0.0560)
##
## Outer iteration: 17
## Iteration: 1 (-411867.0802, 0.9273)
## Iteration: 10 (-411838.9187, 0.1288)
## Iteration: 20 (-411808.6966, 0.1267)
## Iteration: 30 (-411779.0554, 0.1250)
## Iteration: 40 (-411749.9338, 0.1234)
## Iteration: 50 (-411721.2998, 0.1219)
## Group probs = (0.7606, 0.1824, 0.0570)
##
## Outer iteration: 18
## Iteration: 1 (-408735.1521, 0.3817)
## Iteration: 10 (-408709.7442, 0.1208)
## Iteration: 20 (-408682.1986, 0.1189)
## Iteration: 30 (-408655.0954, 0.1174)
## Iteration: 40 (-408628.4078, 0.1160)
## Iteration: 50 (-408602.1209, 0.1147)
## Group probs = (0.7596, 0.1831, 0.0572)
##
## Outer iteration: 19
## Iteration: 1 (-407878.6135, 0.2414)
## Iteration: 10 (-407854.5106, 0.1141)
## Iteration: 20 (-407828.4303, 0.1127)
## Iteration: 30 (-407802.8163, 0.1114)
## Iteration: 40 (-407777.6130, 0.1102)
## Iteration: 50 (-407752.7912, 0.1090)
## Group probs = (0.7622, 0.1805, 0.0573)
##
```

```
## Outer iteration: 20
## Iteration: 1 (-409668.9541, 0.4195)
## Iteration: 10 (-409646.1611, 0.1086)
## Iteration: 20 (-409621.5312, 0.1078)
## Iteration: 30 (-409597.3090, 0.1067)
## Iteration: 40 (-409573.4547, 0.1055)
## Iteration: 50 (-409549.9461, 0.1044)
## Group probs = (0.7593, 0.1828, 0.0579)
##
## Outer iteration: 21
## Iteration: 1 (-407215.5009, 0.1247)
## Iteration: 10 (-407194.2083, 0.1042)
## Iteration: 20 (-407171.1575, 0.1027)
## Iteration: 30 (-407148.5015, 0.1015)
## Iteration: 40 (-407126.1858, 0.1003)
## Iteration: 50 (-407104.1835, 0.0993)
## Group probs = (0.7599, 0.1827, 0.0574)
##
## Outer iteration: 22
## Iteration: 1 (-407617.1761, 0.2505)
## Iteration: 10 (-407596.9829, 0.0991)
## Iteration: 20 (-407575.0119, 0.0983)
## Iteration: 30 (-407553.3530, 0.0974)
## Iteration: 40 (-407531.9775, 0.0965)
## Iteration: 50 (-407510.8716, 0.0956)
## Group probs = (0.7583, 0.1844, 0.0573)
##
## Outer iteration: 23
## Iteration: 1 (-406365.9259, 0.3703)
## Iteration: 10 (-406346.7675, 0.0952)
## Iteration: 20 (-406326.0485, 0.0941)
## Iteration: 30 (-406305.6554, 0.0931)
## Iteration: 40 (-406285.5402, 0.0922)
## Iteration: 50 (-406265.6808, 0.0913)
## Group probs = (0.7580, 0.1847, 0.0574)
##
## Outer iteration: 24
## Iteration: 1 (-406097.4355, 0.1516)
## Iteration: 10 (-406079.5328, 0.0909)
## Iteration: 20 (-406060.0104, 0.0901)
## Iteration: 30 (-406040.7343, 0.0893)
## Iteration: 40 (-406021.6830, 0.0885)
## Iteration: 50 (-406002.8460, 0.0878)
## Group probs = (0.7586, 0.1841, 0.0573)
##
## Outer iteration: 25
## Iteration: 1 (-406547.8895, 0.2773)
## Iteration: 10 (-406530.9427, 0.0871)
## Iteration: 20 (-406512.3777, 0.0865)
## Iteration: 30 (-406494.0206, 0.0858)
## Iteration: 40 (-406475.8609, 0.0851)
## Iteration: 50 (-406457.8926, 0.0845)
## Group probs = (0.7566, 0.1855, 0.0579)
##
```

```
## Outer iteration: 26
## Iteration: 1 (-404772.8957, 0.2563)
## Iteration: 10 (-404756.8901, 0.0841)
## Iteration: 20 (-404739.3576, 0.0833)
## Iteration: 30 (-404722.0115, 0.0826)
## Iteration: 40 (-404704.8431, 0.0819)
## Iteration: 50 (-404687.8479, 0.0812)
## Group probs = (0.7563, 0.1861, 0.0577)
##
## Outer iteration: 27
## Iteration: 1 (-404562.3189, 0.3659)
## Iteration: 10 (-404546.8355, 0.0811)
## Iteration: 20 (-404529.9310, 0.0804)
## Iteration: 30 (-404513.2160, 0.0797)
## Iteration: 40 (-404496.6732, 0.0791)
## Iteration: 50 (-404480.2947, 0.0785)
## Group probs = (0.7547, 0.1865, 0.0589)
##
## Outer iteration: 28
## Iteration: 1 (-402912.2053, 0.6790)
## Iteration: 10 (-402897.2910, 0.0782)
## Iteration: 20 (-402881.1985, 0.0775)
## Iteration: 30 (-402865.3103, 0.0768)
## Iteration: 40 (-402849.5971, 0.0762)
## Iteration: 50 (-402834.0467, 0.0756)
## Group probs = (0.7534, 0.1882, 0.0583)
##
## Outer iteration: 29
## Iteration: 1 (-402048.6111, 0.5056)
## Iteration: 10 (-402034.5355, 0.0753)
## Iteration: 20 (-402019.1483, 0.0747)
## Iteration: 30 (-402003.9158, 0.0741)
## Iteration: 40 (-401988.8274, 0.0736)
## Iteration: 50 (-401973.8779, 0.0731)
## Group probs = (0.7528, 0.1889, 0.0583)
##
## Outer iteration: 30
## Iteration: 1 (-401482.4475, 0.6675)
## Iteration: 10 (-401468.4304, 0.0729)
## Iteration: 20 (-401453.5267, 0.0723)
## Iteration: 30 (-401438.8769, 0.0717)
## Iteration: 40 (-401424.4137, 0.0712)
## Iteration: 50 (-401410.1112, 0.0706)
## Group probs = (0.7543, 0.1867, 0.0590)
##
## Outer iteration: 31
## Iteration: 1 (-402418.2488, 0.8447)
## Iteration: 10 (-402404.6276, 0.0700)
## Iteration: 20 (-402390.3189, 0.0698)
## Iteration: 30 (-402376.2135, 0.0694)
## Iteration: 40 (-402362.2524, 0.0690)
## Iteration: 50 (-402348.4191, 0.0686)
## Group probs = (0.7553, 0.1853, 0.0594)
##
```

```
## Outer iteration: 32
## Iteration: 1 (-403006.5377, 0.4017)
## Iteration: 10 (-402994.1967, 0.0677)
## Iteration: 20 (-402980.8135, 0.0672)
## Iteration: 30 (-402967.5879, 0.0668)
## Iteration: 40 (-402954.4925, 0.0663)
## Iteration: 50 (-402941.5159, 0.0659)
## Group probs = (0.7551, 0.1858, 0.0591)
##
## Outer iteration: 33
## Iteration: 1 (-402752.5718, 0.8395)
## Iteration: 10 (-402740.4818, 0.0659)
## Iteration: 20 (-402727.5623, 0.0654)
## Iteration: 30 (-402714.8162, 0.0649)
## Iteration: 40 (-402702.2028, 0.0645)
## Iteration: 50 (-402689.7065, 0.0640)
## Group probs = (0.7520, 0.1892, 0.0588)
##
## Outer iteration: 34
## Iteration: 1 (-400485.0253, 0.9407)
## Iteration: 10 (-400473.1629, 0.0646)
## Iteration: 20 (-400460.6515, 0.0637)
## Iteration: 30 (-400448.3073, 0.0632)
## Iteration: 40 (-400436.0803, 0.0627)
## Iteration: 50 (-400423.9551, 0.0622)
## Group probs = (0.7535, 0.1876, 0.0589)
##
## Outer iteration: 35
## Iteration: 1 (-401525.8449, 0.5305)
## Iteration: 10 (-401514.7862, 0.0617)
## Iteration: 20 (-401502.8326, 0.0614)
## Iteration: 30 (-401490.9968, 0.0610)
## Iteration: 40 (-401479.2594, 0.0607)
## Iteration: 50 (-401467.6136, 0.0603)
## Group probs = (0.7537, 0.1879, 0.0584)
##
## Outer iteration: 36
## Iteration: 1 (-401840.5486, 0.8092)
## Iteration: 10 (-401829.5891, 0.0603)
## Iteration: 20 (-401817.8143, 0.0599)
## Iteration: 30 (-401806.1635, 0.0596)
## Iteration: 40 (-401794.6107, 0.0592)
## Iteration: 50 (-401783.1466, 0.0589)
## Group probs = (0.7528, 0.1878, 0.0595)
##
## Outer iteration: 37
## Iteration: 1 (-400792.4771, 0.5585)
## Iteration: 10 (-400781.8946, 0.0588)
## Iteration: 20 (-400770.5599, 0.0584)
## Iteration: 30 (-400759.3438, 0.0580)
## Iteration: 40 (-400748.2211, 0.0577)
## Iteration: 50 (-400737.1837, 0.0574)
## Group probs = (0.7510, 0.1892, 0.0598)
##
```

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## Outer iteration: 38
## Iteration: 1 (-399308.3540, 0.1883)
## Iteration: 10 (-399297.9204, 0.0581)
## Iteration: 20 (-399286.7083, 0.0576)
## Iteration: 30 (-399275.6741, 0.0571)
## Iteration: 40 (-399264.7720, 0.0567)
## Iteration: 50 (-399253.9808, 0.0563)
## Group probs = (0.7487, 0.1915, 0.0598)
##
## Outer iteration: 39
## Iteration: 1 (-397692.6378, 0.3153)
## Iteration: 10 (-397682.5810, 0.0566)
## Iteration: 20 (-397671.8790, 0.0559)
## Iteration: 30 (-397661.3193, 0.0554)
## Iteration: 40 (-397650.8621, 0.0550)
## Iteration: 50 (-397640.4916, 0.0547)
## Group probs = (0.7479, 0.1923, 0.0598)
##
## Outer iteration: 40
## Iteration: 1 (-397111.7594, 0.5819)
## Iteration: 10 (-397102.0543, 0.0549)
## Iteration: 20 (-397091.5554, 0.0546)
## Iteration: 30 (-397081.1501, 0.0543)
## Iteration: 40 (-397070.8228, 0.0540)
## Iteration: 50 (-397060.5678, 0.0538)
## Group probs = (0.7499, 0.1909, 0.0592)
##
## Outer iteration: 1
## Iteration: 1 (-466558.9811, Inf)
## Iteration: 10 (-419667.0797, 7.9388)
## Iteration: 20 (-413482.2487, 3.9224)
## Iteration: 30 (-410595.9695, 2.6730)
## Iteration: 40 (-408774.4277, 2.0572)
## Iteration: 50 (-407468.4468, 1.6848)
## Group probs = (0.7617, 0.1769, 0.0614)
##
## Outer iteration: 2
## Iteration: 1 (-420815.1956, 1.9814)
## Iteration: 10 (-420091.3374, 1.3094)
## Iteration: 20 (-419450.4945, 1.1318)
## Iteration: 30 (-418918.9451, 1.0032)
## Iteration: 40 (-418466.5192, 0.9030)
## Iteration: 50 (-418074.3018, 0.8222)
## Group probs = (0.7659, 0.1745, 0.0596)
##
## Outer iteration: 3
## Iteration: 1 (-420830.6095, 0.9885)
## Iteration: 10 (-420502.0785, 0.7694)
## Iteration: 20 (-420177.2664, 0.7135)
## Iteration: 30 (-419886.3041, 0.6641)
## Iteration: 40 (-419623.4051, 0.6211)
## Iteration: 50 (-419384.1500, 0.5833)
## Group probs = (0.7715, 0.1704, 0.0580)
##

```

```
## Outer iteration: 4
## Iteration: 1 (-423598.7810, 0.7032)
## Iteration: 10 (-423390.4917, 0.5574)
## Iteration: 20 (-423178.0819, 0.5294)
## Iteration: 30 (-422982.0877, 0.5027)
## Iteration: 40 (-422800.3451, 0.4782)
## Iteration: 50 (-422631.1194, 0.4560)
## Group probs = (0.7732, 0.1689, 0.0579)
##
## Outer iteration: 5
## Iteration: 1 (-423504.5138, 0.7225)
## Iteration: 10 (-423354.9142, 0.4416)
## Iteration: 20 (-423199.6113, 0.4239)
## Iteration: 30 (-423053.9374, 0.4068)
## Iteration: 40 (-422916.8195, 0.3908)
## Iteration: 50 (-422787.3852, 0.3759)
## Group probs = (0.7740, 0.1686, 0.0574)
##
## Outer iteration: 6
## Iteration: 1 (-423273.0806, 0.4621)
## Iteration: 10 (-423158.5217, 0.3662)
## Iteration: 20 (-423037.9981, 0.3539)
## Iteration: 30 (-422923.6463, 0.3419)
## Iteration: 40 (-422814.8835, 0.3306)
## Iteration: 50 (-422711.2258, 0.3200)
## Group probs = (0.7725, 0.1701, 0.0574)
##
## Outer iteration: 7
## Iteration: 1 (-421373.1592, 0.4158)
## Iteration: 10 (-421281.5364, 0.3134)
## Iteration: 20 (-421184.4618, 0.3036)
## Iteration: 30 (-421091.6433, 0.2945)
## Iteration: 40 (-421002.7032, 0.2860)
## Iteration: 50 (-420917.3409, 0.2780)
## Group probs = (0.7676, 0.1740, 0.0584)
##
## Outer iteration: 8
## Iteration: 1 (-416908.6608, 0.5404)
## Iteration: 10 (-416831.4097, 0.2748)
## Iteration: 20 (-416749.5319, 0.2669)
## Iteration: 30 (-416670.9087, 0.2598)
## Iteration: 40 (-416595.2131, 0.2532)
## Iteration: 50 (-416522.2179, 0.2470)
## Group probs = (0.7668, 0.1750, 0.0582)
##
## Outer iteration: 9
## Iteration: 1 (-415938.0879, 0.4207)
## Iteration: 10 (-415872.3103, 0.2432)
## Iteration: 20 (-415802.1352, 0.2376)
## Iteration: 30 (-415734.4287, 0.2321)
## Iteration: 40 (-415668.9650, 0.2269)
## Iteration: 50 (-415605.5835, 0.2220)
## Group probs = (0.7669, 0.1746, 0.0585)
##
```

```
## Outer iteration: 10
## Iteration: 1 (-415412.9168, 0.5229)
## Iteration: 10 (-415356.6275, 0.2186)
## Iteration: 20 (-415296.0911, 0.2141)
## Iteration: 30 (-415237.4008, 0.2096)
## Iteration: 40 (-415180.4329, 0.2054)
## Iteration: 50 (-415125.0866, 0.2013)
## Group probs = (0.7668, 0.1742, 0.0590)
##
## Outer iteration: 11
## Iteration: 1 (-414928.3537, 0.3308)
## Iteration: 10 (-414878.9088, 0.1986)
## Iteration: 20 (-414825.6325, 0.1949)
## Iteration: 30 (-414773.8385, 0.1912)
## Iteration: 40 (-414723.4327, 0.1876)
## Iteration: 50 (-414674.3398, 0.1842)
## Group probs = (0.7669, 0.1733, 0.0598)
##
## Outer iteration: 12
## Iteration: 1 (-414287.8491, 0.8645)
## Iteration: 10 (-414243.8028, 0.1817)
## Iteration: 20 (-414196.4650, 0.1785)
## Iteration: 30 (-414150.3680, 0.1754)
## Iteration: 40 (-414105.4230, 0.1723)
## Iteration: 50 (-414061.5660, 0.1694)
## Group probs = (0.7629, 0.1762, 0.0609)
##
## Outer iteration: 13
## Iteration: 1 (-410699.3788, 0.3151)
## Iteration: 10 (-410658.3888, 0.1692)
## Iteration: 20 (-410614.9355, 0.1657)
## Iteration: 30 (-410572.8138, 0.1626)
## Iteration: 40 (-410531.8106, 0.1598)
## Iteration: 50 (-410491.8121, 0.1573)
## Group probs = (0.7636, 0.1766, 0.0598)
##
## Outer iteration: 14
## Iteration: 1 (-411261.6249, 0.5102)
## Iteration: 10 (-411225.4964, 0.1563)
## Iteration: 20 (-411186.5520, 0.1538)
## Iteration: 30 (-411148.4869, 0.1514)
## Iteration: 40 (-411111.2296, 0.1492)
## Iteration: 50 (-411074.7368, 0.1470)
## Group probs = (0.7633, 0.1772, 0.0595)
##
## Outer iteration: 15
## Iteration: 1 (-410740.6679, 0.2005)
## Iteration: 10 (-410708.3134, 0.1450)
## Iteration: 20 (-410673.1145, 0.1431)
## Iteration: 30 (-410638.6032, 0.1411)
## Iteration: 40 (-410604.7483, 0.1392)
## Iteration: 50 (-410571.5247, 0.1373)
## Group probs = (0.7637, 0.1763, 0.0600)
##
```

```
## Outer iteration: 16
## Iteration: 1 (-410659.8978, 0.9521)
## Iteration: 10 (-410629.9159, 0.1356)
## Iteration: 20 (-410597.5721, 0.1339)
## Iteration: 30 (-410565.8640, 0.1321)
## Iteration: 40 (-410534.7440, 0.1304)
## Iteration: 50 (-410504.1839, 0.1287)
## Group probs = (0.7633, 0.1779, 0.0588)
##
## Outer iteration: 17
## Iteration: 1 (-410546.8392, 0.9929)
## Iteration: 10 (-410519.2298, 0.1279)
## Iteration: 20 (-410489.3885, 0.1262)
## Iteration: 30 (-410460.0768, 0.1246)
## Iteration: 40 (-410431.2560, 0.1231)
## Iteration: 50 (-410402.9060, 0.1216)
## Group probs = (0.7616, 0.1796, 0.0588)
##
## Outer iteration: 18
## Iteration: 1 (-409106.0061, 0.4805)
## Iteration: 10 (-409080.6275, 0.1209)
## Iteration: 20 (-409053.0393, 0.1193)
## Iteration: 30 (-409025.9127, 0.1179)
## Iteration: 40 (-408999.2201, 0.1165)
## Iteration: 50 (-408972.9436, 0.1152)
## Group probs = (0.7604, 0.1795, 0.0601)
##
## Outer iteration: 19
## Iteration: 1 (-407852.5753, 0.9301)
## Iteration: 10 (-407827.6613, 0.1159)
## Iteration: 20 (-407801.2385, 0.1142)
## Iteration: 30 (-407775.4178, 0.1127)
## Iteration: 40 (-407750.0819, 0.1112)
## Iteration: 50 (-407725.1769, 0.1099)
## Group probs = (0.7627, 0.1773, 0.0601)
##
## Outer iteration: 20
## Iteration: 1 (-409315.2313, 0.3429)
## Iteration: 10 (-409292.9438, 0.1080)
## Iteration: 20 (-409268.7714, 0.1071)
## Iteration: 30 (-409244.9815, 0.1061)
## Iteration: 40 (-409221.5424, 0.1050)
## Iteration: 50 (-409198.4384, 0.1039)
## Group probs = (0.7626, 0.1773, 0.0601)
##
## Outer iteration: 21
## Iteration: 1 (-408983.9565, 0.5235)
## Iteration: 10 (-408962.5748, 0.1043)
## Iteration: 20 (-408939.4201, 0.1032)
## Iteration: 30 (-408916.6614, 0.1021)
## Iteration: 40 (-408894.2525, 0.1010)
## Iteration: 50 (-408872.1690, 0.0999)
## Group probs = (0.7597, 0.1801, 0.0602)
##
```

```
## Outer iteration: 22
## Iteration: 1 (-406662.3963, 0.3995)
## Iteration: 10 (-406643.0003, 0.0990)
## Iteration: 20 (-406621.8896, 0.0977)
## Iteration: 30 (-406601.0619, 0.0966)
## Iteration: 40 (-406580.5010, 0.0956)
## Iteration: 50 (-406560.1980, 0.0947)
## Group probs = (0.7591, 0.1805, 0.0604)
##
## Outer iteration: 23
## Iteration: 1 (-406038.2557, 0.1789)
## Iteration: 10 (-406019.9373, 0.0942)
## Iteration: 20 (-405999.8900, 0.0934)
## Iteration: 30 (-405980.0962, 0.0926)
## Iteration: 40 (-405960.5446, 0.0917)
## Iteration: 50 (-405941.2279, 0.0909)
## Group probs = (0.7587, 0.1810, 0.0603)
##
## Outer iteration: 24
## Iteration: 1 (-405693.4824, 0.2075)
## Iteration: 10 (-405675.7307, 0.0906)
## Iteration: 20 (-405656.3789, 0.0899)
## Iteration: 30 (-405637.2837, 0.0892)
## Iteration: 40 (-405618.4238, 0.0884)
## Iteration: 50 (-405599.7884, 0.0877)
## Group probs = (0.7575, 0.1823, 0.0602)
##
## Outer iteration: 25
## Iteration: 1 (-404783.5282, 0.2998)
## Iteration: 10 (-404766.7240, 0.0874)
## Iteration: 20 (-404748.4123, 0.0865)
## Iteration: 30 (-404730.3443, 0.0857)
## Iteration: 40 (-404712.4979, 0.0850)
## Iteration: 50 (-404694.8609, 0.0842)
## Group probs = (0.7547, 0.1842, 0.0611)
##
## Outer iteration: 26
## Iteration: 1 (-402517.8600, 0.1521)
## Iteration: 10 (-402501.3461, 0.0847)
## Iteration: 20 (-402483.6508, 0.0836)
## Iteration: 30 (-402466.2554, 0.0827)
## Iteration: 40 (-402449.0984, 0.0819)
## Iteration: 50 (-402432.1540, 0.0812)
## Group probs = (0.7567, 0.1822, 0.0611)
##
## Outer iteration: 27
## Iteration: 1 (-403745.7298, 0.3388)
## Iteration: 10 (-403730.4004, 0.0804)
## Iteration: 20 (-403713.8958, 0.0799)
## Iteration: 30 (-403697.6126, 0.0793)
## Iteration: 40 (-403681.5159, 0.0787)
## Iteration: 50 (-403665.5930, 0.0781)
## Group probs = (0.7535, 0.1850, 0.0615)
##
```

```
## Outer iteration: 28
## Iteration: 1 (-401289.6221, 0.4439)
## Iteration: 10 (-401275.1243, 0.0780)
## Iteration: 20 (-401259.4017, 0.0772)
## Iteration: 30 (-401243.8774, 0.0765)
## Iteration: 40 (-401228.5281, 0.0759)
## Iteration: 50 (-401213.3430, 0.0753)
## Group probs = (0.7517, 0.1874, 0.0609)
##
## Outer iteration: 29
## Iteration: 1 (-400045.1445, 0.6836)
## Iteration: 10 (-400031.1580, 0.0755)
## Iteration: 20 (-400016.2210, 0.0746)
## Iteration: 30 (-400001.4834, 0.0738)
## Iteration: 40 (-399986.9034, 0.0732)
## Iteration: 50 (-399972.4672, 0.0726)
## Group probs = (0.7507, 0.1878, 0.0615)
##
## Outer iteration: 30
## Iteration: 1 (-399147.5820, 0.2746)
## Iteration: 10 (-399134.5539, 0.0720)
## Iteration: 20 (-399120.3385, 0.0715)
## Iteration: 30 (-399106.2730, 0.0710)
## Iteration: 40 (-399092.3428, 0.0705)
## Iteration: 50 (-399078.5423, 0.0701)
## Group probs = (0.7540, 0.1844, 0.0616)
##
## Outer iteration: 31
## Iteration: 1 (-401528.4175, 0.5970)
## Iteration: 10 (-401515.6904, 0.0695)
## Iteration: 20 (-401501.9330, 0.0693)
## Iteration: 30 (-401488.3226, 0.0689)
## Iteration: 40 (-401474.8378, 0.0685)
## Iteration: 50 (-401461.4720, 0.0680)
## Group probs = (0.7549, 0.1838, 0.0613)
##
## Outer iteration: 32
## Iteration: 1 (-402099.4674, 0.4465)
## Iteration: 10 (-402086.6901, 0.0683)
## Iteration: 20 (-402073.0405, 0.0679)
## Iteration: 30 (-402059.6076, 0.0674)
## Iteration: 40 (-402046.3394, 0.0670)
## Iteration: 50 (-402033.2141, 0.0665)
## Group probs = (0.7508, 0.1868, 0.0624)
##
## Outer iteration: 33
## Iteration: 1 (-398769.0519, 0.7238)
## Iteration: 10 (-398756.6956, 0.0666)
## Iteration: 20 (-398743.7064, 0.0658)
## Iteration: 30 (-398730.9268, 0.0652)
## Iteration: 40 (-398718.2986, 0.0646)
## Iteration: 50 (-398705.8017, 0.0642)
## Group probs = (0.7517, 0.1872, 0.0612)
##
```

```
## Outer iteration: 34
## Iteration: 1 (-399873.2576, 0.8751)
## Iteration: 10 (-399860.4776, 0.0657)
## Iteration: 20 (-399847.3774, 0.0650)
## Iteration: 30 (-399834.5615, 0.0644)
## Iteration: 40 (-399821.9295, 0.0639)
## Iteration: 50 (-399809.4441, 0.0634)
## Group probs = (0.7496, 0.1879, 0.0625)
##
## Outer iteration: 35
## Iteration: 1 (-397797.5741, 0.7455)
## Iteration: 10 (-397785.6090, 0.0636)
## Iteration: 20 (-397772.9928, 0.0632)
## Iteration: 30 (-397760.5761, 0.0627)
## Iteration: 40 (-397748.3107, 0.0622)
## Iteration: 50 (-397736.1785, 0.0618)
## Group probs = (0.7484, 0.1891, 0.0625)
##
## Outer iteration: 36
## Iteration: 1 (-396952.0182, 0.7548)
## Iteration: 10 (-396941.1266, 0.0611)
## Iteration: 20 (-396929.4580, 0.0605)
## Iteration: 30 (-396917.9316, 0.0600)
## Iteration: 40 (-396906.5119, 0.0596)
## Iteration: 50 (-396895.1879, 0.0593)
## Group probs = (0.7469, 0.1902, 0.0629)
##
## Outer iteration: 37
## Iteration: 1 (-395791.3345, 0.4785)
## Iteration: 10 (-395780.8156, 0.0595)
## Iteration: 20 (-395769.3879, 0.0591)
## Iteration: 30 (-395758.0840, 0.0587)
## Iteration: 40 (-395746.8858, 0.0583)
## Iteration: 50 (-395735.7848, 0.0580)
## Group probs = (0.7469, 0.1897, 0.0635)
##
## Outer iteration: 38
## Iteration: 1 (-395500.1344, 0.4644)
## Iteration: 10 (-395490.0048, 0.0580)
## Iteration: 20 (-395478.9584, 0.0576)
## Iteration: 30 (-395468.0169, 0.0573)
## Iteration: 40 (-395457.1690, 0.0570)
## Iteration: 50 (-395446.4091, 0.0566)
## Group probs = (0.7445, 0.1919, 0.0636)
##
## Outer iteration: 39
## Iteration: 1 (-393763.7275, 0.4438)
## Iteration: 10 (-393753.9069, 0.0565)
## Iteration: 20 (-393743.3053, 0.0560)
## Iteration: 30 (-393732.7999, 0.0556)
## Iteration: 40 (-393722.3759, 0.0553)
## Iteration: 50 (-393712.0276, 0.0549)
## Group probs = (0.7450, 0.1914, 0.0636)
##
```

```

## Outer iteration: 40
## Iteration: 1 (-394059.0249, 0.6210)
## Iteration: 10 (-394049.2135, 0.0551)
## Iteration: 20 (-394038.7255, 0.0550)
## Iteration: 30 (-394028.3616, 0.0547)
## Iteration: 40 (-394018.0900, 0.0544)
## Iteration: 50 (-394007.9004, 0.0541)
## Group probs = (0.7475, 0.1889, 0.0635)
##
## Outer iteration: 1
## Iteration: 1 (-467023.2970, Inf)
## Iteration: 10 (-419983.7323, 7.9482)
## Iteration: 20 (-413774.4464, 3.9243)
## Iteration: 30 (-410880.5332, 271.7949)
## Iteration: 40 (-409055.2746, 2.0548)
## Iteration: 50 (-407746.3573, 1.6828)
## Group probs = (0.7618, 0.1786, 0.0596)
##
## Outer iteration: 2
## Iteration: 1 (-420351.8508, 1.9201)
## Iteration: 10 (-419625.6015, 1.3087)
## Iteration: 20 (-418985.1668, 1.1296)
## Iteration: 30 (-418454.2101, 1.0008)
## Iteration: 40 (-418002.1225, 0.9009)
## Iteration: 50 (-417609.9512, 0.8204)
## Group probs = (0.7692, 0.1736, 0.0572)
##
## Outer iteration: 3
## Iteration: 1 (-423012.1729, 1.1515)
## Iteration: 10 (-422685.5112, 0.7646)
## Iteration: 20 (-422362.2419, 0.7101)
## Iteration: 30 (-422072.3436, 0.6615)
## Iteration: 40 (-421810.1632, 0.6190)
## Iteration: 50 (-421571.3702, 0.5816)
## Group probs = (0.7731, 0.1710, 0.0559)
##
## Outer iteration: 4
## Iteration: 1 (-424174.6606, 0.7433)
## Iteration: 10 (-423966.5038, 0.5573)
## Iteration: 20 (-423753.9520, 0.5292)
## Iteration: 30 (-423557.7163, 0.5024)
## Iteration: 40 (-423375.6455, 0.4780)
## Iteration: 50 (-423206.0179, 0.4558)
## Group probs = (0.7721, 0.1724, 0.0555)
##
## Outer iteration: 5
## Iteration: 1 (-422142.7749, 0.6183)
## Iteration: 10 (-421993.8772, 0.4414)
## Iteration: 20 (-421838.9593, 0.4232)
## Iteration: 30 (-421693.5248, 0.4061)
## Iteration: 40 (-421556.5317, 0.3901)
## Iteration: 50 (-421427.1291, 0.3754)
## Group probs = (0.7708, 0.1731, 0.0560)
##

```

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## Outer iteration: 6
## Iteration: 1 (-420099.3733, 0.6108)
## Iteration: 10 (-419984.0504, 0.3674)
## Iteration: 20 (-419862.9072, 0.3546)
## Iteration: 30 (-419747.9994, 0.3424)
## Iteration: 40 (-419638.7066, 0.3310)
## Iteration: 50 (-419534.5304, 0.3203)
## Group probs = (0.7706, 0.1732, 0.0562)
##
## Outer iteration: 7
## Iteration: 1 (-419192.4443, 0.4663)
## Iteration: 10 (-419099.3366, 0.3134)
## Iteration: 20 (-419001.1270, 0.3040)
## Iteration: 30 (-418907.3565, 0.2950)
## Iteration: 40 (-418817.5642, 0.2866)
## Iteration: 50 (-418731.4147, 0.2786)
## Group probs = (0.7714, 0.1728, 0.0558)
##
## Outer iteration: 8
## Iteration: 1 (-419199.2724, 0.8194)
## Iteration: 10 (-419121.6186, 0.2748)
## Iteration: 20 (-419039.2162, 0.2675)
## Iteration: 30 (-418960.0712, 0.2605)
## Iteration: 40 (-418883.8791, 0.2538)
## Iteration: 50 (-418810.4131, 0.2474)
## Group probs = (0.7691, 0.1750, 0.0560)
##
## Outer iteration: 9
## Iteration: 1 (-416912.5774, 0.4377)
## Iteration: 10 (-416847.6202, 0.2434)
## Iteration: 20 (-416777.9541, 0.2375)
## Iteration: 30 (-416710.6253, 0.2319)
## Iteration: 40 (-416645.4703, 0.2266)
## Iteration: 50 (-416582.3541, 0.2216)
## Group probs = (0.7678, 0.1760, 0.0562)
##
## Outer iteration: 10
## Iteration: 1 (-415482.5811, 0.4114)
## Iteration: 10 (-415425.4291, 0.2193)
## Iteration: 20 (-415364.0692, 0.2147)
## Iteration: 30 (-415304.6012, 0.2103)
## Iteration: 40 (-415246.8822, 0.2060)
## Iteration: 50 (-415190.8042, 0.2019)
## Group probs = (0.7692, 0.1752, 0.0556)
##
## Outer iteration: 11
## Iteration: 1 (-416310.7130, 0.2838)
## Iteration: 10 (-416261.2102, 0.1985)
## Iteration: 20 (-416207.7568, 0.1948)
## Iteration: 30 (-416155.7378, 0.1912)
## Iteration: 40 (-416105.0712, 0.1876)
## Iteration: 50 (-416055.6897, 0.1842)
## Group probs = (0.7648, 0.1786, 0.0566)
##

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```
## Outer iteration: 12
## Iteration: 1 (-412556.1349, 0.2082)
## Iteration: 10 (-412511.3928, 0.1838)
## Iteration: 20 (-412463.4722, 0.1797)
## Iteration: 30 (-412416.8414, 0.1762)
## Iteration: 40 (-412371.3686, 0.1730)
## Iteration: 50 (-412326.9771, 0.1700)
## Group probs = (0.7642, 0.1792, 0.0567)
##
## Outer iteration: 13
## Iteration: 1 (-411747.3273, 0.5778)
## Iteration: 10 (-411707.8565, 0.1675)
## Iteration: 20 (-411665.1696, 0.1648)
## Iteration: 30 (-411623.4680, 0.1621)
## Iteration: 40 (-411582.6902, 0.1596)
## Iteration: 50 (-411542.7910, 0.1571)
## Group probs = (0.7619, 0.1811, 0.0570)
##
## Outer iteration: 14
## Iteration: 1 (-409615.8539, 0.4383)
## Iteration: 10 (-409579.6290, 0.1564)
## Iteration: 20 (-409540.6747, 0.1536)
## Iteration: 30 (-409502.6601, 0.1510)
## Iteration: 40 (-409465.4728, 0.1487)
## Iteration: 50 (-409429.0527, 0.1465)
## Group probs = (0.7582, 0.1846, 0.0573)
##
## Outer iteration: 15
## Iteration: 1 (-406578.7152, 0.3760)
## Iteration: 10 (-406545.6169, 0.1462)
## Iteration: 20 (-406509.8934, 0.1436)
## Iteration: 30 (-406474.9450, 0.1415)
## Iteration: 40 (-406440.6951, 0.1394)
## Iteration: 50 (-406407.0992, 0.1375)
## Group probs = (0.7558, 0.1863, 0.0579)
##
## Outer iteration: 16
## Iteration: 1 (-404495.7990, 0.3907)
## Iteration: 10 (-404465.5680, 0.1365)
## Iteration: 20 (-404432.8266, 0.1345)
## Iteration: 30 (-404400.7370, 0.1326)
## Iteration: 40 (-404369.2439, 0.1309)
## Iteration: 50 (-404338.3139, 0.1292)
## Group probs = (0.7585, 0.1847, 0.0569)
##
## Outer iteration: 17
## Iteration: 1 (-406617.1961, 0.6711)
## Iteration: 10 (-406588.4160, 0.1291)
## Iteration: 20 (-406557.5087, 0.1277)
## Iteration: 30 (-406527.2234, 0.1262)
## Iteration: 40 (-406497.4827, 0.1246)
## Iteration: 50 (-406468.2497, 0.1231)
## Group probs = (0.7594, 0.1835, 0.0571)
##
```

```
## Outer iteration: 18
## Iteration: 1 (-407043.8790, 0.3792)
## Iteration: 10 (-407017.8369, 0.1215)
## Iteration: 20 (-406989.5624, 0.1202)
## Iteration: 30 (-406961.7614, 0.1188)
## Iteration: 40 (-406934.3989, 0.1175)
## Iteration: 50 (-406907.4563, 0.1161)
## Group probs = (0.7605, 0.1825, 0.0570)
##
## Outer iteration: 19
## Iteration: 1 (-407710.7791, 0.3680)
## Iteration: 10 (-407686.8887, 0.1146)
## Iteration: 20 (-407660.8315, 0.1133)
## Iteration: 30 (-407635.1794, 0.1121)
## Iteration: 40 (-407609.9100, 0.1108)
## Iteration: 50 (-407585.0083, 0.1096)
## Group probs = (0.7586, 0.1836, 0.0578)
##
## Outer iteration: 20
## Iteration: 1 (-405914.3734, 0.2991)
## Iteration: 10 (-405891.7634, 0.1094)
## Iteration: 20 (-405867.1493, 0.1082)
## Iteration: 30 (-405842.9210, 0.1070)
## Iteration: 40 (-405819.0520, 0.1059)
## Iteration: 50 (-405795.5251, 0.1048)
## Group probs = (0.7597, 0.1827, 0.0576)
##
## Outer iteration: 21
## Iteration: 1 (-406726.0586, 0.1375)
## Iteration: 10 (-406705.1575, 0.1036)
## Iteration: 20 (-406682.3091, 0.1026)
## Iteration: 30 (-406659.7759, 0.1016)
## Iteration: 40 (-406637.5413, 0.1006)
## Iteration: 50 (-406615.5955, 0.0996)
## Group probs = (0.7584, 0.1836, 0.0580)
##
## Outer iteration: 22
## Iteration: 1 (-405452.5134, 0.1414)
## Iteration: 10 (-405432.6515, 0.0994)
## Iteration: 20 (-405410.9467, 0.0984)
## Iteration: 30 (-405389.5319, 0.0974)
## Iteration: 40 (-405368.3912, 0.0965)
## Iteration: 50 (-405347.5146, 0.0955)
## Group probs = (0.7600, 0.1822, 0.0578)
##
## Outer iteration: 23
## Iteration: 1 (-406619.1655, 0.2412)
## Iteration: 10 (-406600.3957, 0.0945)
## Iteration: 20 (-406579.9938, 0.0938)
## Iteration: 30 (-406559.8581, 0.0930)
## Iteration: 40 (-406539.9711, 0.0922)
## Iteration: 50 (-406520.3236, 0.0914)
## Group probs = (0.7610, 0.1817, 0.0574)
##
```

```
## Outer iteration: 24
## Iteration: 1 (-407348.8998, 0.3450)
## Iteration: 10 (-407331.2880, 0.0904)
## Iteration: 20 (-407312.1855, 0.0895)
## Iteration: 30 (-407293.3274, 0.0886)
## Iteration: 40 (-407274.6892, 0.0879)
## Iteration: 50 (-407256.2602, 0.0871)
## Group probs = (0.7595, 0.1826, 0.0579)
##
## Outer iteration: 25
## Iteration: 1 (-405959.5813, 0.2846)
## Iteration: 10 (-405942.9634, 0.0866)
## Iteration: 20 (-405924.7898, 0.0859)
## Iteration: 30 (-405906.8228, 0.0852)
## Iteration: 40 (-405889.0517, 0.0845)
## Iteration: 50 (-405871.4709, 0.0838)
## Group probs = (0.7575, 0.1845, 0.0580)
##
## Outer iteration: 26
## Iteration: 1 (-404309.6475, 0.1209)
## Iteration: 10 (-404293.8179, 0.0840)
## Iteration: 20 (-404276.5749, 0.0831)
## Iteration: 30 (-404259.5329, 0.0823)
## Iteration: 40 (-404242.6749, 0.0816)
## Iteration: 50 (-404225.9932, 0.0809)
## Group probs = (0.7581, 0.1843, 0.0576)
##
## Outer iteration: 27
## Iteration: 1 (-404951.1602, 0.4687)
## Iteration: 10 (-404935.6437, 0.0807)
## Iteration: 20 (-404918.8237, 0.0802)
## Iteration: 30 (-404902.2148, 0.0797)
## Iteration: 40 (-404885.7895, 0.0791)
## Iteration: 50 (-404869.5368, 0.0785)
## Group probs = (0.7559, 0.1864, 0.0578)
##
## Outer iteration: 28
## Iteration: 1 (-403123.1716, 0.3503)
## Iteration: 10 (-403108.5524, 0.0782)
## Iteration: 20 (-403092.6449, 0.0775)
## Iteration: 30 (-403076.9082, 0.0768)
## Iteration: 40 (-403061.3272, 0.0762)
## Iteration: 50 (-403045.8952, 0.0757)
## Group probs = (0.7529, 0.1888, 0.0583)
##
## Outer iteration: 29
## Iteration: 1 (-400843.6673, 0.3060)
## Iteration: 10 (-400829.4294, 0.0758)
## Iteration: 20 (-400814.1301, 0.0749)
## Iteration: 30 (-400799.0479, 0.0742)
## Iteration: 40 (-400784.1361, 0.0736)
## Iteration: 50 (-400769.3776, 0.0730)
## Group probs = (0.7513, 0.1901, 0.0586)
##
```

```
## Outer iteration: 30
## Iteration: 1 (-399517.3792, 0.4506)
## Iteration: 10 (-399503.6778, 0.0735)
## Iteration: 20 (-399488.9263, 0.0727)
## Iteration: 30 (-399474.3650, 0.0720)
## Iteration: 40 (-399459.9568, 0.0714)
## Iteration: 50 (-399445.6876, 0.0709)
## Group probs = (0.7499, 0.1914, 0.0587)
##
## Outer iteration: 31
## Iteration: 1 (-398451.3404, 0.3078)
## Iteration: 10 (-398438.2183, 0.0712)
## Iteration: 20 (-398423.9702, 0.0705)
## Iteration: 30 (-398409.8998, 0.0699)
## Iteration: 40 (-398395.9770, 0.0694)
## Iteration: 50 (-398382.1886, 0.0689)
## Group probs = (0.7497, 0.1905, 0.0598)
##
## Outer iteration: 32
## Iteration: 1 (-397963.3996, 0.6394)
## Iteration: 10 (-397950.7580, 0.0680)
## Iteration: 20 (-397937.2945, 0.0676)
## Iteration: 30 (-397924.0199, 0.0672)
## Iteration: 40 (-397910.8869, 0.0667)
## Iteration: 50 (-397897.8794, 0.0663)
## Group probs = (0.7507, 0.1894, 0.0599)
##
## Outer iteration: 33
## Iteration: 1 (-398689.8649, 0.4540)
## Iteration: 10 (-398677.7165, 0.0662)
## Iteration: 20 (-398664.6479, 0.0659)
## Iteration: 30 (-398651.7327, 0.0655)
## Iteration: 40 (-398638.9443, 0.0651)
## Iteration: 50 (-398626.2718, 0.0646)
## Group probs = (0.7540, 0.1865, 0.0595)
##
## Outer iteration: 34
## Iteration: 1 (-401213.7596, 0.3133)
## Iteration: 10 (-401201.8058, 0.0637)
## Iteration: 20 (-401189.1568, 0.0635)
## Iteration: 30 (-401176.7101, 0.0631)
## Iteration: 40 (-401164.4049, 0.0628)
## Iteration: 50 (-401152.2206, 0.0624)
## Group probs = (0.7526, 0.1882, 0.0592)
##
## Outer iteration: 35
## Iteration: 1 (-400103.6473, 0.4423)
## Iteration: 10 (-400092.4820, 0.0627)
## Iteration: 20 (-400080.4134, 0.0622)
## Iteration: 30 (-400068.4676, 0.0617)
## Iteration: 40 (-400056.6220, 0.0613)
## Iteration: 50 (-400044.8695, 0.0610)
## Group probs = (0.7518, 0.1890, 0.0592)
##
```

```

## Outer iteration: 36
## Iteration: 1 (-399428.8378, 0.0733)
## Iteration: 10 (-399418.1724, 0.0606)
## Iteration: 20 (-399406.5025, 0.0602)
## Iteration: 30 (-399394.9385, 0.0598)
## Iteration: 40 (-399383.4685, 0.0595)
## Iteration: 50 (-399372.0869, 0.0592)
## Group probs = (0.7531, 0.1871, 0.0597)
##
## Outer iteration: 37
## Iteration: 1 (-400155.8935, 0.6216)
## Iteration: 10 (-400145.5934, 0.0586)
## Iteration: 20 (-400134.4455, 0.0584)
## Iteration: 30 (-400123.4095, 0.0581)
## Iteration: 40 (-400112.4635, 0.0578)
## Iteration: 50 (-400101.6000, 0.0575)
## Group probs = (0.7523, 0.1883, 0.0594)
##
## Outer iteration: 38
## Iteration: 1 (-399592.7859, 0.3847)
## Iteration: 10 (-399582.6285, 0.0578)
## Iteration: 20 (-399571.6046, 0.0575)
## Iteration: 30 (-399560.7022, 0.0571)
## Iteration: 40 (-399549.8981, 0.0568)
## Iteration: 50 (-399539.1824, 0.0565)
## Group probs = (0.7509, 0.1899, 0.0592)
##
## Outer iteration: 39
## Iteration: 1 (-398603.1325, 0.3098)
## Iteration: 10 (-398593.1602, 0.0570)
## Iteration: 20 (-398582.3574, 0.0565)
## Iteration: 30 (-398571.6691, 0.0561)
## Iteration: 40 (-398561.0724, 0.0558)
## Iteration: 50 (-398550.5582, 0.0554)
## Group probs = (0.7531, 0.1881, 0.0588)
##
## Outer iteration: 40
## Iteration: 1 (-400377.2453, 0.2032)
## Iteration: 10 (-400367.7813, 0.0547)
## Iteration: 20 (-400357.4921, 0.0546)
## Iteration: 30 (-400347.2911, 0.0543)
## Iteration: 40 (-400337.1640, 0.0541)
## Iteration: 50 (-400327.1061, 0.0538)
## Group probs = (0.7521, 0.1890, 0.0589)
##
## CCES_2015
## Outer iteration: 1
## Iteration: 1 (-117177.4068, Inf)
## Iteration: 10 (-102902.5268, 4.0800)
## Iteration: 20 (-101175.2190, 1.9927)
## Iteration: 30 (-100443.1696, 1.3234)
## Iteration: 40 (-100014.5631, 0.9956)
## Iteration: 50 (-99722.8294, 0.8020)
## Group probs = (0.7834, 0.1768, 0.0398)

```

```
##
## Outer iteration: 2
## Iteration: 1 (-101861.3692, 1.3064)
## Iteration: 10 (-101704.3376, 0.6056)
## Iteration: 20 (-101572.0734, 0.5230)
## Iteration: 30 (-101464.7409, 0.4631)
## Iteration: 40 (-101374.7580, 0.4166)
## Iteration: 50 (-101297.5857, 0.3793)
## Group probs = (0.7836, 0.1777, 0.0387)
##
## Outer iteration: 3
## Iteration: 1 (-101447.3880, 0.4939)
## Iteration: 10 (-101385.9892, 0.3475)
## Iteration: 20 (-101326.1743, 0.3215)
## Iteration: 30 (-101272.8595, 0.2994)
## Iteration: 40 (-101224.8263, 0.2804)
## Iteration: 50 (-101181.1817, 0.2638)
## Group probs = (0.7823, 0.1792, 0.0386)
##
## Outer iteration: 4
## Iteration: 1 (-101057.9579, 0.6590)
## Iteration: 10 (-101020.9992, 0.2510)
## Iteration: 20 (-100983.4422, 0.2379)
## Iteration: 30 (-100948.7692, 0.2261)
## Iteration: 40 (-100916.5820, 0.2155)
## Iteration: 50 (-100886.5673, 0.2059)
## Group probs = (0.7821, 0.1785, 0.0394)
##
## Outer iteration: 5
## Iteration: 1 (-100804.4408, 0.2048)
## Iteration: 10 (-100778.3436, 0.1995)
## Iteration: 20 (-100751.2145, 0.1914)
## Iteration: 30 (-100725.6939, 0.1839)
## Iteration: 40 (-100701.6071, 0.1770)
## Iteration: 50 (-100678.8107, 0.1706)
## Group probs = (0.7803, 0.1796, 0.0401)
##
## Outer iteration: 6
## Iteration: 1 (-100355.6725, 0.2654)
## Iteration: 10 (-100335.9166, 0.1655)
## Iteration: 20 (-100315.0792, 0.1600)
## Iteration: 30 (-100295.2451, 0.1548)
## Iteration: 40 (-100276.3249, 0.1500)
## Iteration: 50 (-100258.2433, 0.1455)
## Group probs = (0.7783, 0.1808, 0.0409)
##
## Outer iteration: 7
## Iteration: 1 (-99900.8193, 0.3737)
## Iteration: 10 (-99884.6674, 0.1430)
## Iteration: 20 (-99867.5862, 0.1388)
## Iteration: 30 (-99851.2203, 0.1349)
## Iteration: 40 (-99835.5092, 0.1312)
## Iteration: 50 (-99820.4032, 0.1277)
## Group probs = (0.7828, 0.1760, 0.0412)
```

```
##
## Outer iteration: 8
## Iteration: 1 (-100558.9869, 0.5142)
## Iteration: 10 (-100544.8550, 0.1282)
## Iteration: 20 (-100530.0506, 0.1251)
## Iteration: 30 (-100515.8199, 0.1220)
## Iteration: 40 (-100502.0991, 0.1191)
## Iteration: 50 (-100488.8492, 0.1162)
## Group probs = (0.7811, 0.1768, 0.0421)
##
## Outer iteration: 9
## Iteration: 1 (-100107.0016, 0.2177)
## Iteration: 10 (-100095.2177, 0.1139)
## Iteration: 20 (-100082.6448, 0.1113)
## Iteration: 30 (-100070.4875, 0.1088)
## Iteration: 40 (-100058.7133, 0.1064)
## Iteration: 50 (-100047.2975, 0.1041)
## Group probs = (0.7794, 0.1785, 0.0420)
##
## Outer iteration: 10
## Iteration: 1 (-99720.0403, 0.5399)
## Iteration: 10 (-99709.2371, 0.1040)
## Iteration: 20 (-99697.9192, 0.1017)
## Iteration: 30 (-99686.9826, 0.0995)
## Iteration: 40 (-99676.3872, 0.0975)
## Iteration: 50 (-99666.1054, 0.0955)
## Group probs = (0.7782, 0.1794, 0.0424)
##
## Outer iteration: 11
## Iteration: 1 (-99398.1132, 0.4892)
## Iteration: 10 (-99388.1356, 0.0965)
## Iteration: 20 (-99377.7207, 0.0944)
## Iteration: 30 (-99367.6628, 0.0925)
## Iteration: 40 (-99357.9186, 0.0907)
## Iteration: 50 (-99348.4600, 0.0890)
## Group probs = (0.7754, 0.1814, 0.0432)
##
## Outer iteration: 12
## Iteration: 1 (-98808.3227, 0.4493)
## Iteration: 10 (-98799.1218, 0.0902)
## Iteration: 20 (-98789.5309, 0.0882)
## Iteration: 30 (-98780.2583, 0.0864)
## Iteration: 40 (-98771.2665, 0.0848)
## Iteration: 50 (-98762.5306, 0.0832)
## Group probs = (0.7748, 0.1819, 0.0432)
##
## Outer iteration: 13
## Iteration: 1 (-98631.2285, 0.2264)
## Iteration: 10 (-98622.9204, 0.0838)
## Iteration: 20 (-98614.1722, 0.0822)
## Iteration: 30 (-98605.6944, 0.0807)
## Iteration: 40 (-98597.4589, 0.0793)
## Iteration: 50 (-98589.4459, 0.0779)
## Group probs = (0.7713, 0.1855, 0.0433)
```

```
##
## Outer iteration: 14
## Iteration: 1 (-97970.8987, 1.0012)
## Iteration: 10 (-97961.6587, 0.0822)
## Iteration: 20 (-97952.8524, 0.0799)
## Iteration: 30 (-97944.4260, 0.0781)
## Iteration: 40 (-97936.3100, 0.0765)
## Iteration: 50 (-97928.4644, 0.0750)
## Group probs = (0.7698, 0.1857, 0.0445)
##
## Outer iteration: 15
## Iteration: 1 (-97587.8945, 0.5255)
## Iteration: 10 (-97579.0487, 0.0794)
## Iteration: 20 (-97570.3838, 0.0774)
## Iteration: 30 (-97562.1208, 0.0756)
## Iteration: 40 (-97554.1855, 0.0740)
## Iteration: 50 (-97546.5327, 0.0725)
## Group probs = (0.7716, 0.1837, 0.0448)
##
## Outer iteration: 16
## Iteration: 1 (-97794.7121, 0.3906)
## Iteration: 10 (-97785.4074, 0.0776)
## Iteration: 20 (-97776.6689, 0.0754)
## Iteration: 30 (-97768.4016, 0.0736)
## Iteration: 40 (-97760.5009, 0.0719)
## Iteration: 50 (-97752.9100, 0.0704)
## Group probs = (0.7719, 0.1835, 0.0446)
##
## Outer iteration: 17
## Iteration: 1 (-97771.6917, 0.4849)
## Iteration: 10 (-97763.0529, 0.0745)
## Iteration: 20 (-97754.7355, 0.0725)
## Iteration: 30 (-97746.8469, 0.0708)
## Iteration: 40 (-97739.2966, 0.0693)
## Iteration: 50 (-97732.0347, 0.0678)
## Group probs = (0.7684, 0.1867, 0.0450)
##
## Outer iteration: 18
## Iteration: 1 (-97163.5452, 0.8092)
## Iteration: 10 (-97155.4590, 0.0716)
## Iteration: 20 (-97147.6560, 0.0696)
## Iteration: 30 (-97140.2183, 0.0679)
## Iteration: 40 (-97133.0821, 0.0664)
## Iteration: 50 (-97126.2089, 0.0649)
## Group probs = (0.7698, 0.1845, 0.0456)
##
## Outer iteration: 19
## Iteration: 1 (-97342.1120, 0.2400)
## Iteration: 10 (-97334.7331, 0.0673)
## Iteration: 20 (-97327.4036, 0.0657)
## Iteration: 30 (-97320.4091, 0.0643)
## Iteration: 40 (-97313.6792, 0.0631)
## Iteration: 50 (-97307.1785, 0.0619)
## Group probs = (0.7726, 0.1814, 0.0461)
```

```
##
## Outer iteration: 20
## Iteration: 1 (-97726.5667, 0.3066)
## Iteration: 10 (-97719.6926, 0.0636)
## Iteration: 20 (-97712.8222, 0.0624)
## Iteration: 30 (-97706.2540, 0.0613)
## Iteration: 40 (-97699.9193, 0.0602)
## Iteration: 50 (-97693.7859, 0.0592)
## Group probs = (0.7739, 0.1799, 0.0462)
##
## Outer iteration: 21
## Iteration: 1 (-97896.9708, 0.2643)
## Iteration: 10 (-97891.0607, 0.0597)
## Iteration: 20 (-97884.9422, 0.0587)
## Iteration: 30 (-97879.0314, 0.0577)
## Iteration: 40 (-97873.2913, 0.0568)
## Iteration: 50 (-97867.7037, 0.0560)
## Group probs = (0.7765, 0.1773, 0.0463)
##
## Outer iteration: 22
## Iteration: 1 (-98302.5294, 0.2079)
## Iteration: 10 (-98296.7266, 0.0570)
## Iteration: 20 (-98290.8571, 0.0561)
## Iteration: 30 (-98285.2020, 0.0553)
## Iteration: 40 (-98279.7139, 0.0545)
## Iteration: 50 (-98274.3717, 0.0537)
## Group probs = (0.7809, 0.1736, 0.0454)
##
## Outer iteration: 23
## Iteration: 1 (-99134.9910, 0.4338)
## Iteration: 10 (-99129.3916, 0.0548)
## Iteration: 20 (-99123.8451, 0.0539)
## Iteration: 30 (-99118.5082, 0.0531)
## Iteration: 40 (-99113.3256, 0.0524)
## Iteration: 50 (-99108.2758, 0.0517)
## Group probs = (0.7811, 0.1731, 0.0457)
##
## Outer iteration: 24
## Iteration: 1 (-99120.3568, 0.2295)
## Iteration: 10 (-99115.1505, 0.0524)
## Iteration: 20 (-99109.8599, 0.0518)
## Iteration: 30 (-99104.7446, 0.0511)
## Iteration: 40 (-99099.7709, 0.0504)
## Iteration: 50 (-99094.9222, 0.0498)
## Group probs = (0.7831, 0.1712, 0.0457)
##
## Outer iteration: 25
## Iteration: 1 (-99414.1598, 0.3054)
## Iteration: 10 (-99409.5759, 0.0497)
## Iteration: 20 (-99404.7393, 0.0491)
## Iteration: 30 (-99400.0379, 0.0485)
## Iteration: 40 (-99395.4497, 0.0479)
## Iteration: 50 (-99390.9630, 0.0474)
## Group probs = (0.7845, 0.1692, 0.0463)
```

```
##
## Outer iteration: 26
## Iteration: 1 (-99567.7503, 0.2253)
## Iteration: 10 (-99563.4548, 0.0481)
## Iteration: 20 (-99558.9074, 0.0475)
## Iteration: 30 (-99554.4725, 0.0470)
## Iteration: 40 (-99550.1315, 0.0465)
## Iteration: 50 (-99545.8756, 0.0460)
## Group probs = (0.7859, 0.1675, 0.0466)
##
## Outer iteration: 27
## Iteration: 1 (-99799.0024, 0.2266)
## Iteration: 10 (-99794.4975, 0.0473)
## Iteration: 20 (-99789.9526, 0.0467)
## Iteration: 30 (-99785.5459, 0.0462)
## Iteration: 40 (-99781.2447, 0.0457)
## Iteration: 50 (-99777.0350, 0.0452)
## Group probs = (0.7874, 0.1661, 0.0466)
##
## Outer iteration: 28
## Iteration: 1 (-100115.8607, 0.3224)
## Iteration: 10 (-100111.0160, 0.0468)
## Iteration: 20 (-100106.3571, 0.0462)
## Iteration: 30 (-100101.8829, 0.0456)
## Iteration: 40 (-100097.5399, 0.0450)
## Iteration: 50 (-100093.3061, 0.0445)
## Group probs = (0.7920, 0.1619, 0.0461)
##
## Outer iteration: 29
## Iteration: 1 (-100997.2676, 0.3592)
## Iteration: 10 (-100992.5727, 0.0462)
## Iteration: 20 (-100988.0559, 0.0454)
## Iteration: 30 (-100983.7227, 0.0448)
## Iteration: 40 (-100979.5144, 0.0443)
## Iteration: 50 (-100975.4088, 0.0437)
## Group probs = (0.7925, 0.1606, 0.0469)
##
## Outer iteration: 30
## Iteration: 1 (-100983.9007, 0.1889)
## Iteration: 10 (-100979.9629, 0.0439)
## Iteration: 20 (-100975.8226, 0.0434)
## Iteration: 30 (-100971.7909, 0.0429)
## Iteration: 40 (-100967.8483, 0.0425)
## Iteration: 50 (-100963.9849, 0.0420)
## Group probs = (0.7948, 0.1585, 0.0468)
##
## Outer iteration: 31
## Iteration: 1 (-101432.1668, 0.1677)
## Iteration: 10 (-101428.3031, 0.0428)
## Iteration: 20 (-101424.3166, 0.0423)
## Iteration: 30 (-101420.4385, 0.0419)
## Iteration: 40 (-101416.6447, 0.0414)
## Iteration: 50 (-101412.9243, 0.0410)
## Group probs = (0.7988, 0.1544, 0.0468)
```

```
##
## Outer iteration: 32
## Iteration: 1 (-102090.8321, 0.4380)
## Iteration: 10 (-102086.9161, 0.0421)
## Iteration: 20 (-102082.9920, 0.0416)
## Iteration: 30 (-102079.1878, 0.0411)
## Iteration: 40 (-102075.4686, 0.0407)
## Iteration: 50 (-102071.8211, 0.0403)
## Group probs = (0.8024, 0.1512, 0.0464)
##
## Outer iteration: 33
## Iteration: 1 (-102732.4989, 0.3695)
## Iteration: 10 (-102728.8181, 0.0409)
## Iteration: 20 (-102725.0542, 0.0404)
## Iteration: 30 (-102721.3947, 0.0399)
## Iteration: 40 (-102717.8131, 0.0395)
## Iteration: 50 (-102714.2978, 0.0391)
## Group probs = (0.8023, 0.1510, 0.0467)
##
## Outer iteration: 34
## Iteration: 1 (-102656.0712, 0.1412)
## Iteration: 10 (-102652.8060, 0.0391)
## Iteration: 20 (-102649.3027, 0.0387)
## Iteration: 30 (-102645.8638, 0.0384)
## Iteration: 40 (-102642.4807, 0.0380)
## Iteration: 50 (-102639.1484, 0.0377)
## Group probs = (0.8068, 0.1467, 0.0465)
##
## Outer iteration: 35
## Iteration: 1 (-103471.5346, 0.4556)
## Iteration: 10 (-103468.1401, 0.0388)
## Iteration: 20 (-103464.6863, 0.0383)
## Iteration: 30 (-103461.3136, 0.0379)
## Iteration: 40 (-103457.9990, 0.0375)
## Iteration: 50 (-103454.7341, 0.0372)
## Group probs = (0.8077, 0.1456, 0.0467)
##
## Outer iteration: 36
## Iteration: 1 (-103606.2468, 0.0645)
## Iteration: 10 (-103603.1491, 0.0372)
## Iteration: 20 (-103599.8510, 0.0369)
## Iteration: 30 (-103596.6116, 0.0366)
## Iteration: 40 (-103593.4207, 0.0363)
## Iteration: 50 (-103590.2733, 0.0360)
## Group probs = (0.8120, 0.1410, 0.0470)
##
## Outer iteration: 37
## Iteration: 1 (-104325.7838, 0.5202)
## Iteration: 10 (-104322.3911, 0.0374)
## Iteration: 20 (-104319.0249, 0.0370)
## Iteration: 30 (-104315.7474, 0.0366)
## Iteration: 40 (-104312.5289, 0.0363)
## Iteration: 50 (-104309.3599, 0.0359)
## Group probs = (0.8103, 0.1424, 0.0472)
```

```

##
## Outer iteration: 38
## Iteration: 1 (-103978.2748, 0.1869)
## Iteration: 10 (-103975.4304, 0.0352)
## Iteration: 20 (-103972.3809, 0.0349)
## Iteration: 30 (-103969.3739, 0.0347)
## Iteration: 40 (-103966.4036, 0.0344)
## Iteration: 50 (-103963.4673, 0.0342)
## Group probs = (0.8120, 0.1412, 0.0467)
##
## Outer iteration: 39
## Iteration: 1 (-104345.8448, 0.1045)
## Iteration: 10 (-104342.9603, 0.0348)
## Iteration: 20 (-104339.9388, 0.0345)
## Iteration: 30 (-104336.9689, 0.0342)
## Iteration: 40 (-104334.0376, 0.0340)
## Iteration: 50 (-104331.1404, 0.0337)
## Group probs = (0.8111, 0.1417, 0.0472)
##
## Outer iteration: 40
## Iteration: 1 (-104219.9540, 0.3276)
## Iteration: 10 (-104217.2085, 0.0339)
## Iteration: 20 (-104214.2804, 0.0336)
## Iteration: 30 (-104211.3925, 0.0333)
## Iteration: 40 (-104208.5383, 0.0331)
## Iteration: 50 (-104205.7150, 0.0328)
## Group probs = (0.8124, 0.1405, 0.0471)
##
## Outer iteration: 1
## Iteration: 1 (-117050.1483,   Inf)
## Iteration: 10 (-102705.9164, 4.0894)
## Iteration: 20 (-100959.9677, 1.9955)
## Iteration: 30 (-100219.7305, 1.3246)
## Iteration: 40 (-99786.1702, 0.9963)
## Iteration: 50 (-99490.9520, 0.8023)
## Group probs = (0.7786, 0.1834, 0.0380)
##
## Outer iteration: 2
## Iteration: 1 (-100925.3163, 1.4937)
## Iteration: 10 (-100765.3808, 0.6075)
## Iteration: 20 (-100631.7765, 0.5237)
## Iteration: 30 (-100523.5462, 0.4633)
## Iteration: 40 (-100432.8522, 0.4167)
## Iteration: 50 (-100355.0733, 0.3794)
## Group probs = (0.7831, 0.1810, 0.0359)
##
## Outer iteration: 3
## Iteration: 1 (-101233.4563, 0.5152)
## Iteration: 10 (-101170.2954, 0.3507)
## Iteration: 20 (-101109.2925, 0.3246)
## Iteration: 30 (-101054.9265, 0.3024)
## Iteration: 40 (-101005.9428, 0.2831)
## Iteration: 50 (-100961.4349, 0.2664)
## Group probs = (0.7844, 0.1801, 0.0355)

```

```
##
## Outer iteration: 4
## Iteration: 1 (-101255.6225, 0.2816)
## Iteration: 10 (-101217.4364, 0.2555)
## Iteration: 20 (-101178.9585, 0.2421)
## Iteration: 30 (-101143.4589, 0.2300)
## Iteration: 40 (-101110.5161, 0.2190)
## Iteration: 50 (-101079.8076, 0.2092)
## Group probs = (0.7842, 0.1794, 0.0364)
##
## Outer iteration: 5
## Iteration: 1 (-100960.8744, 0.2163)
## Iteration: 10 (-100933.7467, 0.2034)
## Iteration: 20 (-100905.8538, 0.1949)
## Iteration: 30 (-100879.6618, 0.1872)
## Iteration: 40 (-100854.9711, 0.1800)
## Iteration: 50 (-100831.6261, 0.1734)
## Group probs = (0.7860, 0.1770, 0.0370)
##
## Outer iteration: 6
## Iteration: 1 (-101114.7741, 0.2815)
## Iteration: 10 (-101093.7412, 0.1710)
## Iteration: 20 (-101071.7892, 0.1654)
## Iteration: 30 (-101050.9426, 0.1599)
## Iteration: 40 (-101031.0870, 0.1548)
## Iteration: 50 (-101012.1354, 0.1500)
## Group probs = (0.7848, 0.1780, 0.0372)
##
## Outer iteration: 7
## Iteration: 1 (-100859.8538, 0.5547)
## Iteration: 10 (-100842.7445, 0.1477)
## Iteration: 20 (-100824.8174, 0.1433)
## Iteration: 30 (-100807.6713, 0.1391)
## Iteration: 40 (-100791.2344, 0.1352)
## Iteration: 50 (-100775.4498, 0.1315)
## Group probs = (0.7834, 0.1790, 0.0376)
##
## Outer iteration: 8
## Iteration: 1 (-100484.0067, 0.4226)
## Iteration: 10 (-100469.1206, 0.1312)
## Iteration: 20 (-100453.6953, 0.1276)
## Iteration: 30 (-100438.9104, 0.1242)
## Iteration: 40 (-100424.6979, 0.1210)
## Iteration: 50 (-100411.0087, 0.1180)
## Group probs = (0.7830, 0.1789, 0.0381)
##
## Outer iteration: 9
## Iteration: 1 (-100247.1178, 0.2550)
## Iteration: 10 (-100233.9126, 0.1186)
## Iteration: 20 (-100220.2593, 0.1155)
## Iteration: 30 (-100207.1622, 0.1127)
## Iteration: 40 (-100194.5541, 0.1100)
## Iteration: 50 (-100182.3895, 0.1075)
## Group probs = (0.7783, 0.1827, 0.0390)
```

```

##
## Outer iteration: 10
## Iteration: 1 (-99277.3432, 0.5653)
## Iteration: 10 (-99265.7506, 0.1075)
## Iteration: 20 (-99253.8003, 0.1048)
## Iteration: 30 (-99242.3082, 0.1024)
## Iteration: 40 (-99231.2160, 0.1001)
## Iteration: 50 (-99220.4879, 0.0979)
## Group probs = (0.7794, 0.1813, 0.0393)
##
## Outer iteration: 11
## Iteration: 1 (-99437.4752, 0.3220)
## Iteration: 10 (-99426.7466, 0.0995)
## Iteration: 20 (-99415.8159, 0.0972)
## Iteration: 30 (-99405.3041, 0.0950)
## Iteration: 40 (-99395.1544, 0.0930)
## Iteration: 50 (-99385.3317, 0.0911)
## Group probs = (0.7765, 0.1842, 0.0393)
##
## Outer iteration: 12
## Iteration: 1 (-98876.6871, 0.8234)
## Iteration: 10 (-98866.3412, 0.0939)
## Iteration: 20 (-98856.0912, 0.0915)
## Iteration: 30 (-98846.2789, 0.0893)
## Iteration: 40 (-98836.8356, 0.0874)
## Iteration: 50 (-98827.7187, 0.0855)
## Group probs = (0.7777, 0.1817, 0.0406)
##
## Outer iteration: 13
## Iteration: 1 (-98900.8185, 0.2316)
## Iteration: 10 (-98891.4074, 0.0878)
## Iteration: 20 (-98881.8496, 0.0860)
## Iteration: 30 (-98872.6895, 0.0842)
## Iteration: 40 (-98863.8594, 0.0825)
## Iteration: 50 (-98855.3202, 0.0809)
## Group probs = (0.7802, 0.1791, 0.0407)
##
## Outer iteration: 14
## Iteration: 1 (-99269.7928, 0.2567)
## Iteration: 10 (-99260.6038, 0.0835)
## Iteration: 20 (-99251.5670, 0.0815)
## Iteration: 30 (-99242.9326, 0.0798)
## Iteration: 40 (-99234.6180, 0.0782)
## Iteration: 50 (-99226.5803, 0.0766)
## Group probs = (0.7776, 0.1817, 0.0407)
##
## Outer iteration: 15
## Iteration: 1 (-98774.0626, 0.6152)
## Iteration: 10 (-98765.6656, 0.0784)
## Iteration: 20 (-98757.3055, 0.0767)
## Iteration: 30 (-98749.2943, 0.0751)
## Iteration: 40 (-98741.5722, 0.0736)
## Iteration: 50 (-98734.1039, 0.0723)
## Group probs = (0.7808, 0.1783, 0.0409)

```

```
##
## Outer iteration: 16
## Iteration: 1 (-99232.4273, 0.3114)
## Iteration: 10 (-99224.5309, 0.0743)
## Iteration: 20 (-99216.6703, 0.0728)
## Iteration: 30 (-99209.1483, 0.0714)
## Iteration: 40 (-99201.8882, 0.0701)
## Iteration: 50 (-99194.8536, 0.0689)
## Group probs = (0.7819, 0.1775, 0.0406)
##
## Outer iteration: 17
## Iteration: 1 (-99424.7386, 0.0765)
## Iteration: 10 (-99417.7160, 0.0696)
## Iteration: 20 (-99410.5663, 0.0684)
## Iteration: 30 (-99403.6698, 0.0672)
## Iteration: 40 (-99396.9831, 0.0661)
## Iteration: 50 (-99390.4830, 0.0650)
## Group probs = (0.7807, 0.1786, 0.0407)
##
## Outer iteration: 18
## Iteration: 1 (-99272.5238, 0.4314)
## Iteration: 10 (-99266.1373, 0.0656)
## Iteration: 20 (-99259.5547, 0.0645)
## Iteration: 30 (-99253.1778, 0.0635)
## Iteration: 40 (-99246.9776, 0.0625)
## Iteration: 50 (-99240.9377, 0.0615)
## Group probs = (0.7776, 0.1812, 0.0413)
##
## Outer iteration: 19
## Iteration: 1 (-98684.5017, 0.4179)
## Iteration: 10 (-98679.0403, 0.0610)
## Iteration: 20 (-98673.1802, 0.0602)
## Iteration: 30 (-98667.4665, 0.0593)
## Iteration: 40 (-98661.8863, 0.0585)
## Iteration: 50 (-98656.4302, 0.0578)
## Group probs = (0.7763, 0.1822, 0.0415)
##
## Outer iteration: 20
## Iteration: 1 (-98426.3835, 0.4293)
## Iteration: 10 (-98421.1204, 0.0582)
## Iteration: 20 (-98415.5758, 0.0575)
## Iteration: 30 (-98410.1780, 0.0567)
## Iteration: 40 (-98404.9075, 0.0560)
## Iteration: 50 (-98399.7532, 0.0553)
## Group probs = (0.7771, 0.1804, 0.0426)
##
## Outer iteration: 21
## Iteration: 1 (-98444.9712, 0.2368)
## Iteration: 10 (-98439.9143, 0.0557)
## Iteration: 20 (-98434.6225, 0.0550)
## Iteration: 30 (-98429.4745, 0.0543)
## Iteration: 40 (-98424.4480, 0.0536)
## Iteration: 50 (-98419.5310, 0.0530)
## Group probs = (0.7788, 0.1789, 0.0423)
```

```
##
## Outer iteration: 22
## Iteration: 1 (-98769.3062, 0.0977)
## Iteration: 10 (-98764.5795, 0.0532)
## Iteration: 20 (-98759.6224, 0.0526)
## Iteration: 30 (-98754.7877, 0.0520)
## Iteration: 40 (-98750.0566, 0.0514)
## Iteration: 50 (-98745.4202, 0.0508)
## Group probs = (0.7807, 0.1763, 0.0430)
##
## Outer iteration: 23
## Iteration: 1 (-98915.9081, 0.4429)
## Iteration: 10 (-98911.3006, 0.0513)
## Iteration: 20 (-98906.5165, 0.0507)
## Iteration: 30 (-98901.8649, 0.0501)
## Iteration: 40 (-98897.3185, 0.0496)
## Iteration: 50 (-98892.8647, 0.0490)
## Group probs = (0.7827, 0.1750, 0.0423)
##
## Outer iteration: 24
## Iteration: 1 (-99362.9739, 0.1528)
## Iteration: 10 (-99358.5396, 0.0496)
## Iteration: 20 (-99353.9843, 0.0491)
## Iteration: 30 (-99349.5492, 0.0485)
## Iteration: 40 (-99345.2075, 0.0480)
## Iteration: 50 (-99340.9482, 0.0474)
## Group probs = (0.7881, 0.1694, 0.0425)
##
## Outer iteration: 25
## Iteration: 1 (-100212.6383, 0.7658)
## Iteration: 10 (-100208.1205, 0.0488)
## Iteration: 20 (-100203.6212, 0.0481)
## Iteration: 30 (-100199.2631, 0.0475)
## Iteration: 40 (-100195.0054, 0.0469)
## Iteration: 50 (-100190.8331, 0.0464)
## Group probs = (0.7876, 0.1700, 0.0424)
##
## Outer iteration: 26
## Iteration: 1 (-100145.8773, 0.1805)
## Iteration: 10 (-100142.0676, 0.0461)
## Iteration: 20 (-100137.9624, 0.0456)
## Iteration: 30 (-100133.9382, 0.0452)
## Iteration: 40 (-100129.9856, 0.0447)
## Iteration: 50 (-100126.0990, 0.0443)
## Group probs = (0.7917, 0.1658, 0.0425)
##
## Outer iteration: 27
## Iteration: 1 (-100858.4227, 0.4419)
## Iteration: 10 (-100854.6362, 0.0449)
## Iteration: 20 (-100850.6632, 0.0444)
## Iteration: 30 (-100846.7756, 0.0439)
## Iteration: 40 (-100842.9561, 0.0435)
## Iteration: 50 (-100839.1975, 0.0431)
## Group probs = (0.7947, 0.1630, 0.0423)
```

```
##
## Outer iteration: 28
## Iteration: 1 (-101415.6706, 0.2085)
## Iteration: 10 (-101411.7191, 0.0443)
## Iteration: 20 (-101407.7552, 0.0438)
## Iteration: 30 (-101403.8987, 0.0433)
## Iteration: 40 (-101400.1181, 0.0429)
## Iteration: 50 (-101396.4020, 0.0424)
## Group probs = (0.7943, 0.1629, 0.0428)
##
## Outer iteration: 29
## Iteration: 1 (-101299.1919, 0.1198)
## Iteration: 10 (-101295.5975, 0.0425)
## Iteration: 20 (-101291.8347, 0.0421)
## Iteration: 30 (-101288.1511, 0.0417)
## Iteration: 40 (-101284.5317, 0.0414)
## Iteration: 50 (-101280.9692, 0.0410)
## Group probs = (0.7960, 0.1617, 0.0423)
##
## Outer iteration: 30
## Iteration: 1 (-101562.8740, 0.2889)
## Iteration: 10 (-101559.4440, 0.0411)
## Iteration: 20 (-101555.8482, 0.0407)
## Iteration: 30 (-101552.3275, 0.0403)
## Iteration: 40 (-101548.8662, 0.0400)
## Iteration: 50 (-101545.4574, 0.0396)
## Group probs = (0.7966, 0.1610, 0.0424)
##
## Outer iteration: 31
## Iteration: 1 (-101680.8459, 0.1544)
## Iteration: 10 (-101677.6690, 0.0398)
## Iteration: 20 (-101674.2491, 0.0395)
## Iteration: 30 (-101670.8835, 0.0392)
## Iteration: 40 (-101667.5648, 0.0388)
## Iteration: 50 (-101664.2891, 0.0385)
## Group probs = (0.7965, 0.1614, 0.0422)
##
## Outer iteration: 32
## Iteration: 1 (-101684.8455, 0.0808)
## Iteration: 10 (-101681.8799, 0.0381)
## Iteration: 20 (-101678.6699, 0.0378)
## Iteration: 30 (-101675.5022, 0.0375)
## Iteration: 40 (-101672.3728, 0.0372)
## Iteration: 50 (-101669.2794, 0.0369)
## Group probs = (0.7965, 0.1610, 0.0426)
##
## Outer iteration: 33
## Iteration: 1 (-101663.0084, 0.0737)
## Iteration: 10 (-101660.1652, 0.0369)
## Iteration: 20 (-101657.0710, 0.0366)
## Iteration: 30 (-101654.0162, 0.0364)
## Iteration: 40 (-101650.9970, 0.0361)
## Iteration: 50 (-101648.0112, 0.0359)
## Group probs = (0.7972, 0.1603, 0.0424)
```

```
##
## Outer iteration: 34
## Iteration: 1 (-101824.0173, 0.0558)
## Iteration: 10 (-101821.2683, 0.0358)
## Iteration: 20 (-101818.2893, 0.0356)
## Iteration: 30 (-101815.3482, 0.0353)
## Iteration: 40 (-101812.4404, 0.0351)
## Iteration: 50 (-101809.5637, 0.0348)
## Group probs = (0.8023, 0.1549, 0.0428)
##
## Outer iteration: 35
## Iteration: 1 (-102623.2253, 0.7088)
## Iteration: 10 (-102620.2884, 0.0357)
## Iteration: 20 (-102617.2802, 0.0354)
## Iteration: 30 (-102614.3295, 0.0351)
## Iteration: 40 (-102611.4196, 0.0348)
## Iteration: 50 (-102608.5447, 0.0345)
## Group probs = (0.8010, 0.1567, 0.0423)
##
## Outer iteration: 36
## Iteration: 1 (-102433.7680, 0.2752)
## Iteration: 10 (-102431.2119, 0.0342)
## Iteration: 20 (-102428.4215, 0.0339)
## Iteration: 30 (-102425.6606, 0.0337)
## Iteration: 40 (-102422.9267, 0.0335)
## Iteration: 50 (-102420.2185, 0.0332)
## Group probs = (0.7993, 0.1580, 0.0427)
##
## Outer iteration: 37
## Iteration: 1 (-102102.9413, 0.2148)
## Iteration: 10 (-102100.4724, 0.0330)
## Iteration: 20 (-102097.7907, 0.0327)
## Iteration: 30 (-102095.1370, 0.0325)
## Iteration: 40 (-102092.5084, 0.0323)
## Iteration: 50 (-102089.9033, 0.0321)
## Group probs = (0.8050, 0.1529, 0.0421)
##
## Outer iteration: 38
## Iteration: 1 (-103182.2579, 0.4708)
## Iteration: 10 (-103179.4856, 0.0330)
## Iteration: 20 (-103176.7406, 0.0327)
## Iteration: 30 (-103174.0553, 0.0325)
## Iteration: 40 (-103171.4060, 0.0322)
## Iteration: 50 (-103168.7861, 0.0320)
## Group probs = (0.8054, 0.1522, 0.0424)
##
## Outer iteration: 39
## Iteration: 1 (-103216.7424, 0.0874)
## Iteration: 10 (-103214.3443, 0.0318)
## Iteration: 20 (-103211.7355, 0.0316)
## Iteration: 30 (-103209.1578, 0.0313)
## Iteration: 40 (-103206.6071, 0.0311)
## Iteration: 50 (-103204.0811, 0.0309)
## Group probs = (0.8052, 0.1520, 0.0428)
```

```

##
## Outer iteration: 40
## Iteration: 1 (-103150.3209, 0.0882)
## Iteration: 10 (-103147.9943, 0.0310)
## Iteration: 20 (-103145.4607, 0.0308)
## Iteration: 30 (-103142.9534, 0.0307)
## Iteration: 40 (-103140.4691, 0.0305)
## Iteration: 50 (-103138.0066, 0.0303)
## Group probs = (0.8066, 0.1505, 0.0429)
##
## Outer iteration: 1
## Iteration: 1 (-117235.1543, Inf)
## Iteration: 10 (-102896.2423, 4.1079)
## Iteration: 20 (-101138.2686, 2.0029)
## Iteration: 30 (-100393.0878, 1.3290)
## Iteration: 40 (-99956.5631, 0.9994)
## Iteration: 50 (-99659.3463, 0.8047)
## Group probs = (0.7815, 0.1780, 0.0405)
##
## Outer iteration: 2
## Iteration: 1 (-101854.8190, 1.3093)
## Iteration: 10 (-101693.7998, 0.6114)
## Iteration: 20 (-101559.1606, 0.5270)
## Iteration: 30 (-101450.2546, 0.4659)
## Iteration: 40 (-101359.1487, 0.4187)
## Iteration: 50 (-101281.1340, 0.3808)
## Group probs = (0.7823, 0.1780, 0.0396)
##
## Outer iteration: 3
## Iteration: 1 (-101364.5388, 0.4459)
## Iteration: 10 (-101301.6055, 0.3523)
## Iteration: 20 (-101240.4850, 0.3258)
## Iteration: 30 (-101186.0819, 0.3031)
## Iteration: 40 (-101137.1201, 0.2836)
## Iteration: 50 (-101092.6695, 0.2666)
## Group probs = (0.7843, 0.1768, 0.0389)
##
## Outer iteration: 4
## Iteration: 1 (-101553.3504, 0.2964)
## Iteration: 10 (-101515.6261, 0.2545)
## Iteration: 20 (-101477.3764, 0.2412)
## Iteration: 30 (-101442.0728, 0.2291)
## Iteration: 40 (-101409.3052, 0.2182)
## Iteration: 50 (-101378.7545, 0.2084)
## Group probs = (0.7846, 0.1754, 0.0400)
##
## Outer iteration: 5
## Iteration: 1 (-101389.5958, 0.2766)
## Iteration: 10 (-101363.0456, 0.2020)
## Iteration: 20 (-101335.4363, 0.1938)
## Iteration: 30 (-101309.4678, 0.1862)
## Iteration: 40 (-101284.9605, 0.1791)
## Iteration: 50 (-101261.7685, 0.1726)
## Group probs = (0.7887, 0.1708, 0.0405)

```

```
##
## Outer iteration: 6
## Iteration: 1 (-101897.3954, 0.5561)
## Iteration: 10 (-101876.3829, 0.1709)
## Iteration: 20 (-101854.5094, 0.1653)
## Iteration: 30 (-101833.7294, 0.1598)
## Iteration: 40 (-101813.9253, 0.1547)
## Iteration: 50 (-101795.0115, 0.1499)
## Group probs = (0.7883, 0.1708, 0.0409)
##
## Outer iteration: 7
## Iteration: 1 (-101793.4583, 0.2054)
## Iteration: 10 (-101776.9687, 0.1460)
## Iteration: 20 (-101759.4259, 0.1419)
## Iteration: 30 (-101742.5999, 0.1379)
## Iteration: 40 (-101726.4356, 0.1341)
## Iteration: 50 (-101710.8859, 0.1305)
## Group probs = (0.7876, 0.1708, 0.0417)
##
## Outer iteration: 8
## Iteration: 1 (-101484.5988, 0.1368)
## Iteration: 10 (-101470.7779, 0.1289)
## Iteration: 20 (-101455.9967, 0.1257)
## Iteration: 30 (-101441.7422, 0.1226)
## Iteration: 40 (-101427.9781, 0.1197)
## Iteration: 50 (-101414.6732, 0.1168)
## Group probs = (0.7868, 0.1711, 0.0421)
##
## Outer iteration: 9
## Iteration: 1 (-101266.2337, 0.1379)
## Iteration: 10 (-101254.5017, 0.1149)
## Iteration: 20 (-101241.8976, 0.1123)
## Iteration: 30 (-101229.6880, 0.1098)
## Iteration: 40 (-101217.8482, 0.1074)
## Iteration: 50 (-101206.3575, 0.1051)
## Group probs = (0.7935, 0.1643, 0.0422)
##
## Outer iteration: 10
## Iteration: 1 (-102351.3273, 0.7857)
## Iteration: 10 (-102340.1860, 0.1062)
## Iteration: 20 (-102328.6528, 0.1042)
## Iteration: 30 (-102317.5070, 0.1021)
## Iteration: 40 (-102306.6861, 0.1000)
## Iteration: 50 (-102296.1639, 0.0980)
## Group probs = (0.7910, 0.1665, 0.0425)
##
## Outer iteration: 11
## Iteration: 1 (-101792.2485, 0.2004)
## Iteration: 10 (-101783.0476, 0.0958)
## Iteration: 20 (-101773.1491, 0.0940)
## Iteration: 30 (-101763.5089, 0.0922)
## Iteration: 40 (-101754.1089, 0.0906)
## Iteration: 50 (-101744.9366, 0.0890)
## Group probs = (0.7880, 0.1694, 0.0426)
```

```
##
## Outer iteration: 12
## Iteration: 1 (-101222.9523, 0.5909)
## Iteration: 10 (-101214.7486, 0.0877)
## Iteration: 20 (-101205.9412, 0.0860)
## Iteration: 30 (-101197.3504, 0.0845)
## Iteration: 40 (-101188.9589, 0.0830)
## Iteration: 50 (-101180.7554, 0.0817)
## Group probs = (0.7896, 0.1673, 0.0430)
##
## Outer iteration: 13
## Iteration: 1 (-101462.1909, 0.2504)
## Iteration: 10 (-101454.7584, 0.0812)
## Iteration: 20 (-101446.7179, 0.0800)
## Iteration: 30 (-101438.8532, 0.0788)
## Iteration: 40 (-101431.1530, 0.0776)
## Iteration: 50 (-101423.6099, 0.0765)
## Group probs = (0.7899, 0.1662, 0.0439)
##
## Outer iteration: 14
## Iteration: 1 (-101366.6558, 0.1643)
## Iteration: 10 (-101359.7634, 0.0759)
## Iteration: 20 (-101352.3371, 0.0747)
## Iteration: 30 (-101345.0745, 0.0736)
## Iteration: 40 (-101337.9605, 0.0725)
## Iteration: 50 (-101330.9864, 0.0715)
## Group probs = (0.7914, 0.1651, 0.0436)
##
## Outer iteration: 15
## Iteration: 1 (-101586.1702, 0.1486)
## Iteration: 10 (-101579.8816, 0.0711)
## Iteration: 20 (-101573.0739, 0.0701)
## Iteration: 30 (-101566.4010, 0.0692)
## Iteration: 40 (-101559.8527, 0.0683)
## Iteration: 50 (-101553.4228, 0.0674)
## Group probs = (0.7924, 0.1641, 0.0435)
##
## Outer iteration: 16
## Iteration: 1 (-101704.5677, 0.1373)
## Iteration: 10 (-101698.6889, 0.0670)
## Iteration: 20 (-101692.3385, 0.0661)
## Iteration: 30 (-101686.1132, 0.0653)
## Iteration: 40 (-101680.0017, 0.0644)
## Iteration: 50 (-101673.9973, 0.0636)
## Group probs = (0.7920, 0.1645, 0.0435)
##
## Outer iteration: 17
## Iteration: 1 (-101582.1982, 0.1942)
## Iteration: 10 (-101576.6879, 0.0636)
## Iteration: 20 (-101570.7244, 0.0628)
## Iteration: 30 (-101564.8708, 0.0620)
## Iteration: 40 (-101559.1192, 0.0613)
## Iteration: 50 (-101553.4638, 0.0606)
## Group probs = (0.7931, 0.1640, 0.0429)
```

```
##
## Outer iteration: 18
## Iteration: 1 (-101875.5288, 0.1888)
## Iteration: 10 (-101870.4577, 0.0599)
## Iteration: 20 (-101865.0019, 0.0592)
## Iteration: 30 (-101859.6404, 0.0585)
## Iteration: 40 (-101854.3623, 0.0578)
## Iteration: 50 (-101849.1635, 0.0572)
## Group probs = (0.7890, 0.1676, 0.0434)
##
## Outer iteration: 19
## Iteration: 1 (-101121.0821, 0.5353)
## Iteration: 10 (-101116.3618, 0.0562)
## Iteration: 20 (-101111.3297, 0.0554)
## Iteration: 30 (-101106.3840, 0.0548)
## Iteration: 40 (-101101.5125, 0.0542)
## Iteration: 50 (-101096.7107, 0.0536)
## Group probs = (0.7907, 0.1661, 0.0432)
##
## Outer iteration: 20
## Iteration: 1 (-101446.9975, 0.1251)
## Iteration: 10 (-101442.4918, 0.0538)
## Iteration: 20 (-101437.6802, 0.0532)
## Iteration: 30 (-101432.9469, 0.0527)
## Iteration: 40 (-101428.2831, 0.0521)
## Iteration: 50 (-101423.6852, 0.0516)
## Group probs = (0.7855, 0.1707, 0.0439)
##
## Outer iteration: 21
## Iteration: 1 (-100483.1100, 0.7916)
## Iteration: 10 (-100478.6404, 0.0514)
## Iteration: 20 (-100474.0487, 0.0505)
## Iteration: 30 (-100469.5578, 0.0499)
## Iteration: 40 (-100465.1429, 0.0494)
## Iteration: 50 (-100460.7956, 0.0489)
## Group probs = (0.7837, 0.1721, 0.0442)
##
## Outer iteration: 22
## Iteration: 1 (-100125.7558, 0.3275)
## Iteration: 10 (-100121.5084, 0.0499)
## Iteration: 20 (-100117.0405, 0.0493)
## Iteration: 30 (-100112.6560, 0.0488)
## Iteration: 40 (-100108.3445, 0.0482)
## Iteration: 50 (-100104.1001, 0.0477)
## Group probs = (0.7836, 0.1722, 0.0443)
##
## Outer iteration: 23
## Iteration: 1 (-100080.4360, 0.3272)
## Iteration: 10 (-100076.0113, 0.0495)
## Iteration: 20 (-100071.4830, 0.0489)
## Iteration: 30 (-100067.0557, 0.0484)
## Iteration: 40 (-100062.7128, 0.0478)
## Iteration: 50 (-100058.4459, 0.0473)
## Group probs = (0.7833, 0.1724, 0.0443)
```

```
##
## Outer iteration: 24
## Iteration: 1 (-100090.0070, 0.4122)
## Iteration: 10 (-100085.5689, 0.0488)
## Iteration: 20 (-100081.0740, 0.0481)
## Iteration: 30 (-100076.6824, 0.0474)
## Iteration: 40 (-100072.3790, 0.0469)
## Iteration: 50 (-100068.1558, 0.0463)
## Group probs = (0.7856, 0.1697, 0.0447)
##
## Outer iteration: 25
## Iteration: 1 (-100396.0890, 0.2584)
## Iteration: 10 (-100391.4244, 0.0480)
## Iteration: 20 (-100386.7684, 0.0474)
## Iteration: 30 (-100382.2704, 0.0468)
## Iteration: 40 (-100377.8918, 0.0462)
## Iteration: 50 (-100373.6142, 0.0457)
## Group probs = (0.7837, 0.1717, 0.0445)
##
## Outer iteration: 26
## Iteration: 1 (-100059.3479, 0.5072)
## Iteration: 10 (-100054.6364, 0.0483)
## Iteration: 20 (-100050.0142, 0.0475)
## Iteration: 30 (-100045.5311, 0.0468)
## Iteration: 40 (-100041.1624, 0.0462)
## Iteration: 50 (-100036.8947, 0.0456)
## Group probs = (0.7830, 0.1722, 0.0448)
##
## Outer iteration: 27
## Iteration: 1 (-99938.2834, 0.6317)
## Iteration: 10 (-99933.0452, 0.0494)
## Iteration: 20 (-99928.1102, 0.0485)
## Iteration: 30 (-99923.3663, 0.0477)
## Iteration: 40 (-99918.7717, 0.0470)
## Iteration: 50 (-99914.3051, 0.0463)
## Group probs = (0.7817, 0.1732, 0.0451)
##
## Outer iteration: 28
## Iteration: 1 (-99691.2108, 0.5424)
## Iteration: 10 (-99685.9449, 0.0494)
## Iteration: 20 (-99680.9201, 0.0485)
## Iteration: 30 (-99676.1016, 0.0476)
## Iteration: 40 (-99671.4468, 0.0469)
## Iteration: 50 (-99666.9324, 0.0461)
## Group probs = (0.7839, 0.1704, 0.0457)
##
## Outer iteration: 29
## Iteration: 1 (-99984.2055, 0.4054)
## Iteration: 10 (-99978.0304, 0.0507)
## Iteration: 20 (-99972.5108, 0.0496)
## Iteration: 30 (-99967.2982, 0.0487)
## Iteration: 40 (-99962.3048, 0.0478)
## Iteration: 50 (-99957.4907, 0.0470)
## Group probs = (0.7810, 0.1729, 0.0461)
```

```
##
## Outer iteration: 30
## Iteration: 1 (-99433.0678, 0.8571)
## Iteration: 10 (-99427.0004, 0.0515)
## Iteration: 20 (-99421.4056, 0.0504)
## Iteration: 30 (-99416.0913, 0.0493)
## Iteration: 40 (-99410.9962, 0.0484)
## Iteration: 50 (-99406.0875, 0.0475)
## Group probs = (0.7831, 0.1705, 0.0463)
##
## Outer iteration: 31
## Iteration: 1 (-99739.1234, 0.1898)
## Iteration: 10 (-99733.5697, 0.0494)
## Iteration: 20 (-99728.1759, 0.0484)
## Iteration: 30 (-99723.0460, 0.0475)
## Iteration: 40 (-99718.1178, 0.0466)
## Iteration: 50 (-99713.3609, 0.0458)
## Group probs = (0.7817, 0.1720, 0.0463)
##
## Outer iteration: 32
## Iteration: 1 (-99397.5911, 0.1416)
## Iteration: 10 (-99392.9103, 0.0467)
## Iteration: 20 (-99388.0883, 0.0459)
## Iteration: 30 (-99383.4380, 0.0452)
## Iteration: 40 (-99378.9354, 0.0444)
## Iteration: 50 (-99374.5654, 0.0437)
## Group probs = (0.7806, 0.1733, 0.0462)
##
## Outer iteration: 33
## Iteration: 1 (-99259.3795, 0.3373)
## Iteration: 10 (-99254.9757, 0.0448)
## Iteration: 20 (-99250.4793, 0.0440)
## Iteration: 30 (-99246.1287, 0.0432)
## Iteration: 40 (-99241.9050, 0.0425)
## Iteration: 50 (-99237.7969, 0.0418)
## Group probs = (0.7839, 0.1696, 0.0465)
##
## Outer iteration: 34
## Iteration: 1 (-99776.9205, 0.2770)
## Iteration: 10 (-99772.3359, 0.0430)
## Iteration: 20 (-99767.8252, 0.0423)
## Iteration: 30 (-99763.5072, 0.0417)
## Iteration: 40 (-99759.3318, 0.0411)
## Iteration: 50 (-99755.2780, 0.0406)
## Group probs = (0.7836, 0.1701, 0.0463)
##
## Outer iteration: 35
## Iteration: 1 (-99746.6388, 0.3414)
## Iteration: 10 (-99742.5391, 0.0419)
## Iteration: 20 (-99738.3684, 0.0413)
## Iteration: 30 (-99734.3333, 0.0407)
## Iteration: 40 (-99730.4114, 0.0401)
## Iteration: 50 (-99726.5909, 0.0395)
## Group probs = (0.7872, 0.1668, 0.0460)
```

```

##
## Outer iteration: 36
## Iteration: 1 (-100403.7663, 0.3292)
## Iteration: 10 (-100399.6590, 0.0402)
## Iteration: 20 (-100395.6065, 0.0395)
## Iteration: 30 (-100391.7105, 0.0390)
## Iteration: 40 (-100387.9300, 0.0384)
## Iteration: 50 (-100384.2487, 0.0379)
## Group probs = (0.7906, 0.1635, 0.0459)
##
## Outer iteration: 37
## Iteration: 1 (-100978.1526, 0.3313)
## Iteration: 10 (-100974.2355, 0.0386)
## Iteration: 20 (-100970.3368, 0.0381)
## Iteration: 30 (-100966.5849, 0.0376)
## Iteration: 40 (-100962.9428, 0.0371)
## Iteration: 50 (-100959.3951, 0.0367)
## Group probs = (0.7919, 0.1621, 0.0460)
##
## Outer iteration: 38
## Iteration: 1 (-101224.1447, 0.1154)
## Iteration: 10 (-101220.4310, 0.0375)
## Iteration: 20 (-101216.6678, 0.0370)
## Iteration: 30 (-101213.0357, 0.0366)
## Iteration: 40 (-101209.5066, 0.0362)
## Iteration: 50 (-101206.0672, 0.0357)
## Group probs = (0.7909, 0.1629, 0.0463)
##
## Outer iteration: 39
## Iteration: 1 (-101027.5183, 0.2937)
## Iteration: 10 (-101024.1782, 0.0361)
## Iteration: 20 (-101020.6799, 0.0357)
## Iteration: 30 (-101017.2785, 0.0353)
## Iteration: 40 (-101013.9602, 0.0349)
## Iteration: 50 (-101010.7167, 0.0346)
## Group probs = (0.7926, 0.1610, 0.0464)
##
## Outer iteration: 40
## Iteration: 1 (-101326.4944, 0.1178)
## Iteration: 10 (-101323.2941, 0.0351)
## Iteration: 20 (-101319.9548, 0.0347)
## Iteration: 30 (-101316.7064, 0.0344)
## Iteration: 40 (-101313.5319, 0.0340)
## Iteration: 50 (-101310.4232, 0.0337)
## Group probs = (0.7965, 0.1576, 0.0459)
##
## Outer iteration: 1
## Iteration: 1 (-116929.0726, Inf)
## Iteration: 10 (-102713.2958, 4.0942)
## Iteration: 20 (-100983.1337, 2.0078)
## Iteration: 30 (-100246.1537, 1.3374)
## Iteration: 40 (-99813.2105, 1.0081)
## Iteration: 50 (-99517.9939, 0.8128)
## Group probs = (0.7817, 0.1805, 0.0378)

```

```

##
## Outer iteration: 2
## Iteration: 1 (-102090.2398, 1.1822)
## Iteration: 10 (-101931.3692, 0.6181)
## Iteration: 20 (-101797.3593, 0.5347)
## Iteration: 30 (-101688.5432, 0.4737)
## Iteration: 40 (-101597.2898, 0.4262)
## Iteration: 50 (-101519.0161, 0.3880)
## Group probs = (0.7859, 0.1776, 0.0365)
##
## Outer iteration: 3
## Iteration: 1 (-102359.3251, 0.6834)
## Iteration: 10 (-102296.5476, 0.3577)
## Iteration: 20 (-102235.3198, 0.3312)
## Iteration: 30 (-102180.7162, 0.3085)
## Iteration: 40 (-102131.5037, 0.2888)
## Iteration: 50 (-102086.7763, 0.2717)
## Group probs = (0.7858, 0.1774, 0.0368)
##
## Outer iteration: 4
## Iteration: 1 (-102030.8911, 0.3903)
## Iteration: 10 (-101993.0880, 0.2598)
## Iteration: 20 (-101954.5626, 0.2461)
## Iteration: 30 (-101918.9937, 0.2338)
## Iteration: 40 (-101885.9716, 0.2227)
## Iteration: 50 (-101855.1753, 0.2127)
## Group probs = (0.7895, 0.1735, 0.0370)
##
## Outer iteration: 5
## Iteration: 1 (-102485.4445, 0.4853)
## Iteration: 10 (-102458.1544, 0.2082)
## Iteration: 20 (-102429.9166, 0.1999)
## Iteration: 30 (-102403.3703, 0.1921)
## Iteration: 40 (-102378.3188, 0.1847)
## Iteration: 50 (-102354.6111, 0.1779)
## Group probs = (0.7917, 0.1707, 0.0377)
##
## Outer iteration: 6
## Iteration: 1 (-102722.9718, 0.4213)
## Iteration: 10 (-102702.1154, 0.1737)
## Iteration: 20 (-102680.1346, 0.1680)
## Iteration: 30 (-102659.2162, 0.1625)
## Iteration: 40 (-102639.2641, 0.1573)
## Iteration: 50 (-102620.1982, 0.1524)
## Group probs = (0.7929, 0.1691, 0.0380)
##
## Outer iteration: 7
## Iteration: 1 (-102879.0496, 0.1769)
## Iteration: 10 (-102862.3923, 0.1484)
## Iteration: 20 (-102844.6669, 0.1442)
## Iteration: 30 (-102827.6627, 0.1401)
## Iteration: 40 (-102811.3237, 0.1363)
## Iteration: 50 (-102795.6028, 0.1326)
## Group probs = (0.7936, 0.1685, 0.0379)

```

```
##
## Outer iteration: 8
## Iteration: 1 (-102975.1899, 0.1677)
## Iteration: 10 (-102961.3433, 0.1304)
## Iteration: 20 (-102946.5602, 0.1272)
## Iteration: 30 (-102932.3035, 0.1241)
## Iteration: 40 (-102918.5338, 0.1211)
## Iteration: 50 (-102905.2198, 0.1182)
## Group probs = (0.7911, 0.1703, 0.0386)
##
## Outer iteration: 9
## Iteration: 1 (-102435.4923, 0.2319)
## Iteration: 10 (-102423.7357, 0.1163)
## Iteration: 20 (-102411.1338, 0.1137)
## Iteration: 30 (-102398.9251, 0.1112)
## Iteration: 40 (-102387.0839, 0.1087)
## Iteration: 50 (-102375.5894, 0.1064)
## Group probs = (0.7945, 0.1662, 0.0393)
##
## Outer iteration: 10
## Iteration: 1 (-102870.1705, 0.6567)
## Iteration: 10 (-102859.6082, 0.1060)
## Iteration: 20 (-102848.3130, 0.1040)
## Iteration: 30 (-102837.3484, 0.1019)
## Iteration: 40 (-102826.6876, 0.0999)
## Iteration: 50 (-102816.3131, 0.0980)
## Group probs = (0.7927, 0.1676, 0.0397)
##
## Outer iteration: 11
## Iteration: 1 (-102463.5088, 0.1240)
## Iteration: 10 (-102454.2747, 0.0967)
## Iteration: 20 (-102444.3239, 0.0949)
## Iteration: 30 (-102434.6361, 0.0932)
## Iteration: 40 (-102425.1936, 0.0915)
## Iteration: 50 (-102415.9831, 0.0899)
## Group probs = (0.7932, 0.1674, 0.0394)
##
## Outer iteration: 12
## Iteration: 1 (-102627.4243, 0.1976)
## Iteration: 10 (-102619.1582, 0.0887)
## Iteration: 20 (-102610.2617, 0.0872)
## Iteration: 30 (-102601.5883, 0.0857)
## Iteration: 40 (-102593.1192, 0.0843)
## Iteration: 50 (-102584.8426, 0.0829)
## Group probs = (0.7947, 0.1653, 0.0400)
##
## Outer iteration: 13
## Iteration: 1 (-102793.3968, 0.2497)
## Iteration: 10 (-102785.8569, 0.0828)
## Iteration: 20 (-102777.6990, 0.0816)
## Iteration: 30 (-102769.7258, 0.0803)
## Iteration: 40 (-102761.9248, 0.0791)
## Iteration: 50 (-102754.2875, 0.0779)
## Group probs = (0.7941, 0.1659, 0.0400)
```

```
##
## Outer iteration: 14
## Iteration: 1 (-102649.9931, 0.1374)
## Iteration: 10 (-102643.3085, 0.0760)
## Iteration: 20 (-102636.0705, 0.0748)
## Iteration: 30 (-102628.9790, 0.0737)
## Iteration: 40 (-102622.0244, 0.0726)
## Iteration: 50 (-102615.2009, 0.0716)
## Group probs = (0.7980, 0.1614, 0.0405)
##
## Outer iteration: 15
## Iteration: 1 (-103229.3539, 0.4249)
## Iteration: 10 (-103222.9260, 0.0719)
## Iteration: 20 (-103216.0247, 0.0711)
## Iteration: 30 (-103209.2672, 0.0701)
## Iteration: 40 (-103202.6379, 0.0692)
## Iteration: 50 (-103196.1292, 0.0683)
## Group probs = (0.7955, 0.1640, 0.0405)
##
## Outer iteration: 16
## Iteration: 1 (-102741.1159, 0.1451)
## Iteration: 10 (-102735.3681, 0.0674)
## Iteration: 20 (-102729.1541, 0.0664)
## Iteration: 30 (-102723.0534, 0.0656)
## Iteration: 40 (-102717.0570, 0.0647)
## Iteration: 50 (-102711.1605, 0.0639)
## Group probs = (0.7965, 0.1635, 0.0401)
##
## Outer iteration: 17
## Iteration: 1 (-102890.2688, 0.1073)
## Iteration: 10 (-102884.9818, 0.0632)
## Iteration: 20 (-102879.2329, 0.0625)
## Iteration: 30 (-102873.5799, 0.0618)
## Iteration: 40 (-102868.0175, 0.0611)
## Iteration: 50 (-102862.5421, 0.0603)
## Group probs = (0.7968, 0.1626, 0.0405)
##
## Outer iteration: 18
## Iteration: 1 (-102885.7098, 0.0816)
## Iteration: 10 (-102880.7417, 0.0599)
## Iteration: 20 (-102875.3212, 0.0593)
## Iteration: 30 (-102869.9848, 0.0586)
## Iteration: 40 (-102864.7286, 0.0579)
## Iteration: 50 (-102859.5498, 0.0573)
## Group probs = (0.7963, 0.1630, 0.0407)
##
## Outer iteration: 19
## Iteration: 1 (-102760.9829, 0.1793)
## Iteration: 10 (-102756.3415, 0.0571)
## Iteration: 20 (-102751.2778, 0.0564)
## Iteration: 30 (-102746.2892, 0.0557)
## Iteration: 40 (-102741.3714, 0.0551)
## Iteration: 50 (-102736.5221, 0.0545)
## Group probs = (0.7932, 0.1663, 0.0405)
```

```
##
## Outer iteration: 20
## Iteration: 1 (-102270.2407, 0.3339)
## Iteration: 10 (-102265.8861, 0.0541)
## Iteration: 20 (-102261.1950, 0.0534)
## Iteration: 30 (-102256.5791, 0.0528)
## Iteration: 40 (-102252.0285, 0.0522)
## Iteration: 50 (-102247.5395, 0.0517)
## Group probs = (0.7954, 0.1641, 0.0405)
##
## Outer iteration: 21
## Iteration: 1 (-102676.5874, 0.1538)
## Iteration: 10 (-102672.4135, 0.0518)
## Iteration: 20 (-102667.9017, 0.0513)
## Iteration: 30 (-102663.4567, 0.0508)
## Iteration: 40 (-102659.0705, 0.0503)
## Iteration: 50 (-102654.7400, 0.0499)
## Group probs = (0.7951, 0.1644, 0.0405)
##
## Outer iteration: 22
## Iteration: 1 (-102537.4310, 0.1790)
## Iteration: 10 (-102533.5744, 0.0492)
## Iteration: 20 (-102529.3826, 0.0487)
## Iteration: 30 (-102525.2455, 0.0483)
## Iteration: 40 (-102521.1588, 0.0478)
## Iteration: 50 (-102517.1206, 0.0474)
## Group probs = (0.7926, 0.1665, 0.0409)
##
## Outer iteration: 23
## Iteration: 1 (-102022.8696, 0.3723)
## Iteration: 10 (-102019.1122, 0.0470)
## Iteration: 20 (-102015.1298, 0.0463)
## Iteration: 30 (-102011.2154, 0.0459)
## Iteration: 40 (-102007.3524, 0.0454)
## Iteration: 50 (-102003.5357, 0.0450)
## Group probs = (0.7916, 0.1666, 0.0418)
##
## Outer iteration: 24
## Iteration: 1 (-101748.6421, 0.0652)
## Iteration: 10 (-101745.0188, 0.0455)
## Iteration: 20 (-101741.1397, 0.0450)
## Iteration: 30 (-101737.3174, 0.0446)
## Iteration: 40 (-101733.5424, 0.0442)
## Iteration: 50 (-101729.8115, 0.0439)
## Group probs = (0.7929, 0.1655, 0.0416)
##
## Outer iteration: 25
## Iteration: 1 (-101969.0175, 0.1529)
## Iteration: 10 (-101965.6630, 0.0435)
## Iteration: 20 (-101962.0111, 0.0431)
## Iteration: 30 (-101958.4025, 0.0428)
## Iteration: 40 (-101954.8334, 0.0425)
## Iteration: 50 (-101951.3023, 0.0421)
## Group probs = (0.7955, 0.1630, 0.0415)
```

```

##
## Outer iteration: 26
## Iteration: 1 (-102427.4017, 0.3103)
## Iteration: 10 (-102424.1497, 0.0419)
## Iteration: 20 (-102420.6436, 0.0416)
## Iteration: 30 (-102417.1817, 0.0413)
## Iteration: 40 (-102413.7571, 0.0410)
## Iteration: 50 (-102410.3676, 0.0407)
## Group probs = (0.7923, 0.1664, 0.0414)
##
## Outer iteration: 27
## Iteration: 1 (-101880.7505, 0.2982)
## Iteration: 10 (-101877.7307, 0.0403)
## Iteration: 20 (-101874.4642, 0.0399)
## Iteration: 30 (-101871.2388, 0.0396)
## Iteration: 40 (-101868.0479, 0.0393)
## Iteration: 50 (-101864.8892, 0.0390)
## Group probs = (0.7923, 0.1661, 0.0416)
##
## Outer iteration: 28
## Iteration: 1 (-101816.7835, 0.2129)
## Iteration: 10 (-101813.8630, 0.0389)
## Iteration: 20 (-101810.7152, 0.0386)
## Iteration: 30 (-101807.6058, 0.0383)
## Iteration: 40 (-101804.5281, 0.0381)
## Iteration: 50 (-101801.4803, 0.0378)
## Group probs = (0.7917, 0.1667, 0.0416)
##
## Outer iteration: 29
## Iteration: 1 (-101697.3916, 0.1261)
## Iteration: 10 (-101694.6300, 0.0377)
## Iteration: 20 (-101691.6144, 0.0374)
## Iteration: 30 (-101688.6295, 0.0371)
## Iteration: 40 (-101685.6724, 0.0368)
## Iteration: 50 (-101682.7420, 0.0366)
## Group probs = (0.7891, 0.1692, 0.0417)
##
## Outer iteration: 30
## Iteration: 1 (-101240.2687, 0.3002)
## Iteration: 10 (-101237.5496, 0.0364)
## Iteration: 20 (-101234.6682, 0.0359)
## Iteration: 30 (-101231.8301, 0.0356)
## Iteration: 40 (-101229.0231, 0.0353)
## Iteration: 50 (-101226.2431, 0.0351)
## Group probs = (0.7940, 0.1647, 0.0413)
##
## Outer iteration: 31
## Iteration: 1 (-102165.6398, 0.3182)
## Iteration: 10 (-102162.7748, 0.0354)
## Iteration: 20 (-102159.9014, 0.0351)
## Iteration: 30 (-102157.0922, 0.0349)
## Iteration: 40 (-102154.3180, 0.0347)
## Iteration: 50 (-102151.5713, 0.0345)
## Group probs = (0.7951, 0.1637, 0.0413)

```

```

##
## Outer iteration: 32
## Iteration: 1 (-102374.7025, 0.2446)
## Iteration: 10 (-102372.1860, 0.0343)
## Iteration: 20 (-102369.4572, 0.0341)
## Iteration: 30 (-102366.7607, 0.0339)
## Iteration: 40 (-102364.0904, 0.0337)
## Iteration: 50 (-102361.4440, 0.0335)
## Group probs = (0.7927, 0.1658, 0.0415)
##
## Outer iteration: 33
## Iteration: 1 (-101962.3955, 0.2496)
## Iteration: 10 (-101960.0061, 0.0331)
## Iteration: 20 (-101957.4400, 0.0328)
## Iteration: 30 (-101954.9039, 0.0325)
## Iteration: 40 (-101952.3903, 0.0323)
## Iteration: 50 (-101949.8973, 0.0321)
## Group probs = (0.7955, 0.1625, 0.0421)
##
## Outer iteration: 34
## Iteration: 1 (-102364.6887, 0.2545)
## Iteration: 10 (-102362.2902, 0.0323)
## Iteration: 20 (-102359.7164, 0.0322)
## Iteration: 30 (-102357.1735, 0.0320)
## Iteration: 40 (-102354.6532, 0.0318)
## Iteration: 50 (-102352.1531, 0.0316)
## Group probs = (0.7921, 0.1657, 0.0422)
##
## Outer iteration: 35
## Iteration: 1 (-101745.0442, 0.3195)
## Iteration: 10 (-101742.7494, 0.0315)
## Iteration: 20 (-101740.3159, 0.0311)
## Iteration: 30 (-101737.9152, 0.0308)
## Iteration: 40 (-101735.5357, 0.0306)
## Iteration: 50 (-101733.1745, 0.0304)
## Group probs = (0.7925, 0.1655, 0.0420)
##
## Outer iteration: 36
## Iteration: 1 (-101813.0384, 0.0736)
## Iteration: 10 (-101810.8804, 0.0305)
## Iteration: 20 (-101808.5125, 0.0303)
## Iteration: 30 (-101806.1637, 0.0301)
## Iteration: 40 (-101803.8321, 0.0299)
## Iteration: 50 (-101801.5171, 0.0298)
## Group probs = (0.7936, 0.1643, 0.0421)
##
## Outer iteration: 37
## Iteration: 1 (-101912.0919, 0.3036)
## Iteration: 10 (-101909.9276, 0.0297)
## Iteration: 20 (-101907.6009, 0.0296)
## Iteration: 30 (-101905.2995, 0.0295)
## Iteration: 40 (-101903.0174, 0.0293)
## Iteration: 50 (-101900.7526, 0.0292)
## Group probs = (0.7937, 0.1643, 0.0420)

```

```
##
## Outer iteration: 38
## Iteration: 1 (-101907.7762, 0.0783)
## Iteration: 10 (-101905.6755, 0.0291)
## Iteration: 20 (-101903.3789, 0.0289)
## Iteration: 30 (-101901.1026, 0.0288)
## Iteration: 40 (-101898.8439, 0.0286)
## Iteration: 50 (-101896.6017, 0.0285)
## Group probs = (0.7918, 0.1658, 0.0424)
##
## Outer iteration: 39
## Iteration: 1 (-101602.1219, 0.2199)
## Iteration: 10 (-101600.0164, 0.0285)
## Iteration: 20 (-101597.7991, 0.0282)
## Iteration: 30 (-101595.6101, 0.0280)
## Iteration: 40 (-101593.4389, 0.0278)
## Iteration: 50 (-101591.2829, 0.0277)
## Group probs = (0.7929, 0.1644, 0.0427)
##
## Outer iteration: 40
## Iteration: 1 (-101667.8026, 0.3219)
## Iteration: 10 (-101665.7565, 0.0278)
## Iteration: 20 (-101663.5509, 0.0277)
## Iteration: 30 (-101661.3656, 0.0276)
## Iteration: 40 (-101659.1962, 0.0275)
## Iteration: 50 (-101657.0414, 0.0273)
## Group probs = (0.7943, 0.1630, 0.0427)
##
## Outer iteration: 1
## Iteration: 1 (-117446.7154,   Inf)
## Iteration: 10 (-103142.7960, 4.0865)
## Iteration: 20 (-101404.3046, 1.9927)
## Iteration: 30 (-100666.2703, 1.3234)
## Iteration: 40 (-100233.4824, 0.9959)
## Iteration: 50 (-99938.6814, 0.8023)
## Group probs = (0.7820, 0.1795, 0.0385)
##
## Outer iteration: 2
## Iteration: 1 (-101988.3850, 1.3775)
## Iteration: 10 (-101830.7903, 0.6015)
## Iteration: 20 (-101699.2365, 0.5189)
## Iteration: 30 (-101592.6268, 0.4592)
## Iteration: 40 (-101503.3049, 0.4130)
## Iteration: 50 (-101426.7272, 0.3760)
## Group probs = (0.7852, 0.1772, 0.0377)
##
## Outer iteration: 3
## Iteration: 1 (-101970.1332, 0.5512)
## Iteration: 10 (-101907.7089, 0.3494)
## Iteration: 20 (-101847.0904, 0.3234)
## Iteration: 30 (-101793.0921, 0.3011)
## Iteration: 40 (-101744.4678, 0.2818)
## Iteration: 50 (-101700.3090, 0.2651)
## Group probs = (0.7832, 0.1787, 0.0381)
```

```
##
## Outer iteration: 4
## Iteration: 1 (-101339.3369, 0.3773)
## Iteration: 10 (-101302.2495, 0.2518)
## Iteration: 20 (-101264.5203, 0.2383)
## Iteration: 30 (-101229.7003, 0.2263)
## Iteration: 40 (-101197.3891, 0.2156)
## Iteration: 50 (-101167.2716, 0.2059)
## Group probs = (0.7851, 0.1763, 0.0386)
##
## Outer iteration: 5
## Iteration: 1 (-101438.6063, 0.2935)
## Iteration: 10 (-101412.0251, 0.2010)
## Iteration: 20 (-101384.5149, 0.1928)
## Iteration: 30 (-101358.6630, 0.1852)
## Iteration: 40 (-101334.2820, 0.1781)
## Iteration: 50 (-101311.2229, 0.1716)
## Group probs = (0.7826, 0.1785, 0.0388)
##
## Outer iteration: 6
## Iteration: 1 (-100899.2412, 0.3874)
## Iteration: 10 (-100879.4726, 0.1651)
## Iteration: 20 (-100858.7149, 0.1594)
## Iteration: 30 (-100838.9749, 0.1541)
## Iteration: 40 (-100820.1549, 0.1493)
## Iteration: 50 (-100802.1770, 0.1447)
## Group probs = (0.7834, 0.1772, 0.0394)
##
## Outer iteration: 7
## Iteration: 1 (-100903.4667, 0.1651)
## Iteration: 10 (-100887.3598, 0.1433)
## Iteration: 20 (-100870.2566, 0.1393)
## Iteration: 30 (-100853.8618, 0.1354)
## Iteration: 40 (-100838.1188, 0.1317)
## Iteration: 50 (-100822.9805, 0.1282)
## Group probs = (0.7832, 0.1767, 0.0401)
##
## Outer iteration: 8
## Iteration: 1 (-100790.5431, 0.2345)
## Iteration: 10 (-100776.9913, 0.1263)
## Iteration: 20 (-100762.5372, 0.1232)
## Iteration: 30 (-100748.6080, 0.1202)
## Iteration: 40 (-100735.1644, 0.1173)
## Iteration: 50 (-100722.1743, 0.1145)
## Group probs = (0.7848, 0.1749, 0.0403)
##
## Outer iteration: 9
## Iteration: 1 (-100994.5512, 0.1395)
## Iteration: 10 (-100982.7500, 0.1140)
## Iteration: 20 (-100970.1748, 0.1115)
## Iteration: 30 (-100958.0150, 0.1090)
## Iteration: 40 (-100946.2368, 0.1066)
## Iteration: 50 (-100934.8159, 0.1043)
## Group probs = (0.7829, 0.1760, 0.0411)
```

```
##
## Outer iteration: 10
## Iteration: 1 (-100565.0087, 0.2718)
## Iteration: 10 (-100554.7908, 0.1030)
## Iteration: 20 (-100543.8174, 0.1008)
## Iteration: 30 (-100533.1657, 0.0988)
## Iteration: 40 (-100522.8148, 0.0968)
## Iteration: 50 (-100512.7477, 0.0949)
## Group probs = (0.7818, 0.1762, 0.0420)
##
## Outer iteration: 11
## Iteration: 1 (-100272.3416, 0.2217)
## Iteration: 10 (-100263.1169, 0.0944)
## Iteration: 20 (-100253.2371, 0.0925)
## Iteration: 30 (-100243.6351, 0.0907)
## Iteration: 40 (-100234.2897, 0.0891)
## Iteration: 50 (-100225.1850, 0.0875)
## Group probs = (0.7835, 0.1748, 0.0418)
##
## Outer iteration: 12
## Iteration: 1 (-100558.9576, 0.1057)
## Iteration: 10 (-100550.6712, 0.0868)
## Iteration: 20 (-100541.7987, 0.0854)
## Iteration: 30 (-100533.1563, 0.0839)
## Iteration: 40 (-100524.7252, 0.0825)
## Iteration: 50 (-100516.4933, 0.0811)
## Group probs = (0.7871, 0.1709, 0.0421)
##
## Outer iteration: 13
## Iteration: 1 (-101055.3532, 0.4050)
## Iteration: 10 (-101047.3846, 0.0821)
## Iteration: 20 (-101039.0270, 0.0808)
## Iteration: 30 (-101030.9035, 0.0796)
## Iteration: 40 (-101022.9781, 0.0783)
## Iteration: 50 (-101015.2346, 0.0770)
## Group probs = (0.7859, 0.1717, 0.0424)
##
## Outer iteration: 14
## Iteration: 1 (-100780.0715, 0.1527)
## Iteration: 10 (-100773.1471, 0.0758)
## Iteration: 20 (-100765.6892, 0.0746)
## Iteration: 30 (-100758.4031, 0.0735)
## Iteration: 40 (-100751.2742, 0.0724)
## Iteration: 50 (-100744.2937, 0.0714)
## Group probs = (0.7828, 0.1751, 0.0421)
##
## Outer iteration: 15
## Iteration: 1 (-100288.6150, 0.5139)
## Iteration: 10 (-100282.3489, 0.0707)
## Iteration: 20 (-100275.6103, 0.0696)
## Iteration: 30 (-100269.0117, 0.0686)
## Iteration: 40 (-100262.5435, 0.0677)
## Iteration: 50 (-100256.1996, 0.0667)
## Group probs = (0.7800, 0.1777, 0.0422)
```

```
##
## Outer iteration: 16
## Iteration: 1 (-99786.2430, 0.6944)
## Iteration: 10 (-99779.9562, 0.0676)
## Iteration: 20 (-99773.4671, 0.0664)
## Iteration: 30 (-99767.1404, 0.0654)
## Iteration: 40 (-99760.9554, 0.0644)
## Iteration: 50 (-99754.9005, 0.0636)
## Group probs = (0.7819, 0.1752, 0.0429)
##
## Outer iteration: 17
## Iteration: 1 (-99960.8961, 0.2762)
## Iteration: 10 (-99955.0583, 0.0642)
## Iteration: 20 (-99948.8634, 0.0633)
## Iteration: 30 (-99942.8225, 0.0625)
## Iteration: 40 (-99936.9152, 0.0617)
## Iteration: 50 (-99931.1300, 0.0608)
## Group probs = (0.7800, 0.1771, 0.0429)
##
## Outer iteration: 18
## Iteration: 1 (-99672.4442, 0.7273)
## Iteration: 10 (-99666.4460, 0.0629)
## Iteration: 20 (-99660.3782, 0.0617)
## Iteration: 30 (-99654.4782, 0.0607)
## Iteration: 40 (-99648.7208, 0.0598)
## Iteration: 50 (-99643.0922, 0.0590)
## Group probs = (0.7774, 0.1791, 0.0435)
##
## Outer iteration: 19
## Iteration: 1 (-99133.5884, 0.5710)
## Iteration: 10 (-99127.5175, 0.0613)
## Iteration: 20 (-99121.4574, 0.0601)
## Iteration: 30 (-99115.6045, 0.0591)
## Iteration: 40 (-99109.9211, 0.0582)
## Iteration: 50 (-99104.3861, 0.0573)
## Group probs = (0.7770, 0.1790, 0.0440)
##
## Outer iteration: 20
## Iteration: 1 (-99011.6715, 0.5803)
## Iteration: 10 (-99004.9034, 0.0618)
## Iteration: 20 (-98998.5164, 0.0604)
## Iteration: 30 (-98992.4122, 0.0593)
## Iteration: 40 (-98986.5281, 0.0583)
## Iteration: 50 (-98980.8308, 0.0573)
## Group probs = (0.7764, 0.1792, 0.0444)
##
## Outer iteration: 21
## Iteration: 1 (-98833.5370, 0.3471)
## Iteration: 10 (-98827.3499, 0.0601)
## Iteration: 20 (-98821.1989, 0.0589)
## Iteration: 30 (-98815.2992, 0.0578)
## Iteration: 40 (-98809.6036, 0.0567)
## Iteration: 50 (-98804.0843, 0.0558)
## Group probs = (0.7737, 0.1817, 0.0446)
```

```

##
## Outer iteration: 22
## Iteration: 1 (-98301.0858, 0.6100)
## Iteration: 10 (-98294.8932, 0.0589)
## Iteration: 20 (-98288.8380, 0.0577)
## Iteration: 30 (-98283.0399, 0.0566)
## Iteration: 40 (-98277.4519, 0.0555)
## Iteration: 50 (-98272.0461, 0.0545)
## Group probs = (0.7740, 0.1808, 0.0452)
##
## Outer iteration: 23
## Iteration: 1 (-98230.9076, 0.1278)
## Iteration: 10 (-98225.2023, 0.0565)
## Iteration: 20 (-98219.4646, 0.0554)
## Iteration: 30 (-98213.9557, 0.0544)
## Iteration: 40 (-98208.6338, 0.0535)
## Iteration: 50 (-98203.4752, 0.0526)
## Group probs = (0.7780, 0.1773, 0.0448)
##
## Outer iteration: 24
## Iteration: 1 (-98894.5623, 0.2918)
## Iteration: 10 (-98888.9314, 0.0541)
## Iteration: 20 (-98883.3869, 0.0531)
## Iteration: 30 (-98878.0859, 0.0523)
## Iteration: 40 (-98872.9647, 0.0514)
## Iteration: 50 (-98867.9960, 0.0506)
## Group probs = (0.7761, 0.1795, 0.0444)
##
## Outer iteration: 25
## Iteration: 1 (-98589.3290, 0.6036)
## Iteration: 10 (-98583.8842, 0.0528)
## Iteration: 20 (-98578.5465, 0.0518)
## Iteration: 30 (-98573.4167, 0.0509)
## Iteration: 40 (-98568.4561, 0.0501)
## Iteration: 50 (-98563.6437, 0.0493)
## Group probs = (0.7746, 0.1800, 0.0455)
##
## Outer iteration: 26
## Iteration: 1 (-98243.3546, 0.4163)
## Iteration: 10 (-98238.2514, 0.0510)
## Iteration: 20 (-98233.0759, 0.0502)
## Iteration: 30 (-98228.0975, 0.0494)
## Iteration: 40 (-98223.2805, 0.0486)
## Iteration: 50 (-98218.6051, 0.0478)
## Group probs = (0.7775, 0.1773, 0.0452)
##
## Outer iteration: 27
## Iteration: 1 (-98747.4467, 0.2177)
## Iteration: 10 (-98742.4473, 0.0493)
## Iteration: 20 (-98737.5279, 0.0484)
## Iteration: 30 (-98732.8039, 0.0477)
## Iteration: 40 (-98728.2269, 0.0470)
## Iteration: 50 (-98723.7767, 0.0463)
## Group probs = (0.7831, 0.1717, 0.0452)

```

```
##
## Outer iteration: 28
## Iteration: 1 (-99672.2713, 0.4770)
## Iteration: 10 (-99666.7701, 0.0483)
## Iteration: 20 (-99661.6112, 0.0474)
## Iteration: 30 (-99656.7317, 0.0467)
## Iteration: 40 (-99652.0406, 0.0461)
## Iteration: 50 (-99647.5026, 0.0454)
## Group probs = (0.7842, 0.1705, 0.0452)
##
## Outer iteration: 29
## Iteration: 1 (-99871.8491, 0.1469)
## Iteration: 10 (-99867.1148, 0.0466)
## Iteration: 20 (-99862.3540, 0.0459)
## Iteration: 30 (-99857.7785, 0.0453)
## Iteration: 40 (-99853.3503, 0.0447)
## Iteration: 50 (-99849.0501, 0.0441)
## Group probs = (0.7852, 0.1693, 0.0455)
##
## Outer iteration: 30
## Iteration: 1 (-99964.6281, 0.2393)
## Iteration: 10 (-99960.1051, 0.0447)
## Iteration: 20 (-99955.5351, 0.0441)
## Iteration: 30 (-99951.1425, 0.0436)
## Iteration: 40 (-99946.8896, 0.0430)
## Iteration: 50 (-99942.7582, 0.0425)
## Group probs = (0.7884, 0.1663, 0.0453)
##
## Outer iteration: 31
## Iteration: 1 (-100557.1884, 0.1599)
## Iteration: 10 (-100552.7482, 0.0439)
## Iteration: 20 (-100548.3556, 0.0433)
## Iteration: 30 (-100544.1412, 0.0427)
## Iteration: 40 (-100540.0582, 0.0422)
## Iteration: 50 (-100536.0867, 0.0417)
## Group probs = (0.7913, 0.1633, 0.0454)
##
## Outer iteration: 32
## Iteration: 1 (-101098.7467, 0.2094)
## Iteration: 10 (-101094.2990, 0.0430)
## Iteration: 20 (-101089.9633, 0.0424)
## Iteration: 30 (-101085.8125, 0.0419)
## Iteration: 40 (-101081.7950, 0.0414)
## Iteration: 50 (-101077.8896, 0.0409)
## Group probs = (0.7963, 0.1577, 0.0460)
##
## Outer iteration: 33
## Iteration: 1 (-101910.3353, 0.6536)
## Iteration: 10 (-101906.1278, 0.0421)
## Iteration: 20 (-101902.0053, 0.0415)
## Iteration: 30 (-101898.0489, 0.0410)
## Iteration: 40 (-101894.2112, 0.0405)
## Iteration: 50 (-101890.4726, 0.0401)
## Group probs = (0.8014, 0.1533, 0.0452)
```

```
##
## Outer iteration: 34
## Iteration: 1 (-102881.0731, 0.4367)
## Iteration: 10 (-102876.9042, 0.0412)
## Iteration: 20 (-102872.8848, 0.0406)
## Iteration: 30 (-102869.0368, 0.0401)
## Iteration: 40 (-102865.3071, 0.0396)
## Iteration: 50 (-102861.6741, 0.0392)
## Group probs = (0.8049, 0.1496, 0.0455)
##
## Outer iteration: 35
## Iteration: 1 (-103403.8208, 0.4994)
## Iteration: 10 (-103400.0319, 0.0398)
## Iteration: 20 (-103396.2021, 0.0394)
## Iteration: 30 (-103392.5077, 0.0389)
## Iteration: 40 (-103388.9152, 0.0385)
## Iteration: 50 (-103385.4087, 0.0381)
## Group probs = (0.8095, 0.1459, 0.0446)
##
## Outer iteration: 36
## Iteration: 1 (-104348.7349, 0.2014)
## Iteration: 10 (-104344.5153, 0.0398)
## Iteration: 20 (-104340.6182, 0.0392)
## Iteration: 30 (-104336.9048, 0.0387)
## Iteration: 40 (-104333.3081, 0.0382)
## Iteration: 50 (-104329.8036, 0.0378)
## Group probs = (0.8115, 0.1435, 0.0450)
##
## Outer iteration: 37
## Iteration: 1 (-104667.9276, 0.0997)
## Iteration: 10 (-104664.3794, 0.0384)
## Iteration: 20 (-104660.7528, 0.0380)
## Iteration: 30 (-104657.2408, 0.0376)
## Iteration: 40 (-104653.8155, 0.0372)
## Iteration: 50 (-104650.4634, 0.0368)
## Group probs = (0.8145, 0.1402, 0.0453)
##
## Outer iteration: 38
## Iteration: 1 (-105166.1960, 0.4755)
## Iteration: 10 (-105162.7942, 0.0374)
## Iteration: 20 (-105159.3253, 0.0370)
## Iteration: 30 (-105155.9544, 0.0366)
## Iteration: 40 (-105152.6576, 0.0362)
## Iteration: 50 (-105149.4242, 0.0359)
## Group probs = (0.8159, 0.1389, 0.0452)
##
## Outer iteration: 39
## Iteration: 1 (-105434.6587, 0.1024)
## Iteration: 10 (-105431.5570, 0.0361)
## Iteration: 20 (-105428.2849, 0.0357)
## Iteration: 30 (-105425.0859, 0.0354)
## Iteration: 40 (-105421.9460, 0.0351)
## Iteration: 50 (-105418.8581, 0.0347)
## Group probs = (0.8173, 0.1369, 0.0459)
```

```

##
## Outer iteration: 40
## Iteration: 1 (-105597.8733, 0.3385)
## Iteration: 10 (-105594.9721, 0.0351)
## Iteration: 20 (-105591.8795, 0.0348)
## Iteration: 30 (-105588.8412, 0.0344)
## Iteration: 40 (-105585.8482, 0.0341)
## Iteration: 50 (-105582.8959, 0.0338)
## Group probs = (0.8162, 0.1386, 0.0452)
##
## CCES_2016
## Outer iteration: 1
## Iteration: 1 (-392855.2407, Inf)
## Iteration: 10 (-346118.8182, 8.6123)
## Iteration: 20 (-340192.2631, 4.2688)
## Iteration: 30 (-337608.0855, 2.8710)
## Iteration: 40 (-336032.1341, 2.1887)
## Iteration: 50 (-334908.8536, 1.7887)
## Group probs = (0.6541, 0.2987, 0.0472)
##
## Outer iteration: 2
## Iteration: 1 (-350811.7472, 2.0364)
## Iteration: 10 (-350259.3933, 1.2768)
## Iteration: 20 (-349823.0478, 1.0850)
## Iteration: 30 (-349470.5164, 0.9564)
## Iteration: 40 (-349173.1037, 0.8602)
## Iteration: 50 (-348915.5852, 0.7846)
## Group probs = (0.6631, 0.2913, 0.0456)
##
## Outer iteration: 3
## Iteration: 1 (-355233.8032, 1.0974)
## Iteration: 10 (-355016.3017, 0.7353)
## Iteration: 20 (-354805.2603, 0.6803)
## Iteration: 30 (-354615.7506, 0.6346)
## Iteration: 40 (-354443.6456, 0.5955)
## Iteration: 50 (-354286.0833, 0.5614)
## Group probs = (0.6683, 0.2873, 0.0445)
##
## Outer iteration: 4
## Iteration: 1 (-358471.1180, 1.3640)
## Iteration: 10 (-358325.3006, 0.5508)
## Iteration: 20 (-358176.9643, 0.5236)
## Iteration: 30 (-358039.3887, 0.4984)
## Iteration: 40 (-357911.0572, 0.4755)
## Iteration: 50 (-357790.8107, 0.4547)
## Group probs = (0.6711, 0.2844, 0.0445)
##
## Outer iteration: 5
## Iteration: 1 (-359359.8293, 0.9191)
## Iteration: 10 (-359247.1953, 0.4518)
## Iteration: 20 (-359130.0667, 0.4352)
## Iteration: 30 (-359019.5905, 0.4186)
## Iteration: 40 (-358914.9581, 0.4030)
## Iteration: 50 (-358815.5445, 0.3885)

```

```

## Group probs = (0.6726, 0.2826, 0.0448)
##
## Outer iteration: 6
## Iteration: 1 (-359688.1480, 0.7163)
## Iteration: 10 (-359594.3101, 0.3883)
## Iteration: 20 (-359495.6945, 0.3763)
## Iteration: 30 (-359401.5895, 0.3641)
## Iteration: 40 (-359311.4869, 0.3526)
## Iteration: 50 (-359225.0014, 0.3418)
## Group probs = (0.6730, 0.2820, 0.0449)
##
## Outer iteration: 7
## Iteration: 1 (-359561.5792, 0.5201)
## Iteration: 10 (-359479.7842, 0.3425)
## Iteration: 20 (-359393.2693, 0.3333)
## Iteration: 30 (-359310.0517, 0.3240)
## Iteration: 40 (-359229.7669, 0.3152)
## Iteration: 50 (-359152.1529, 0.3069)
## Group probs = (0.6663, 0.2879, 0.0458)
##
## Outer iteration: 8
## Iteration: 1 (-354194.7803, 0.4370)
## Iteration: 10 (-354120.6454, 0.3092)
## Iteration: 20 (-354042.3006, 0.3011)
## Iteration: 30 (-353966.5366, 0.2935)
## Iteration: 40 (-353893.0121, 0.2865)
## Iteration: 50 (-353821.5174, 0.2799)
## Group probs = (0.6692, 0.2847, 0.0461)
##
## Outer iteration: 9
## Iteration: 1 (-355649.0648, 1.1423)
## Iteration: 10 (-355577.9010, 0.2852)
## Iteration: 20 (-355502.1931, 0.2796)
## Iteration: 30 (-355428.6285, 0.2736)
## Iteration: 40 (-355356.9329, 0.2679)
## Iteration: 50 (-355286.9490, 0.2625)
## Group probs = (0.6730, 0.2803, 0.0467)
##
## Outer iteration: 10
## Iteration: 1 (-357628.4831, 0.6535)
## Iteration: 10 (-357559.2331, 0.2668)
## Iteration: 20 (-357484.9356, 0.2625)
## Iteration: 30 (-357412.5308, 0.2576)
## Iteration: 40 (-357341.8336, 0.2529)
## Iteration: 50 (-357272.7427, 0.2483)
## Group probs = (0.6715, 0.2813, 0.0472)
##
## Outer iteration: 11
## Iteration: 1 (-355843.6539, 1.0225)
## Iteration: 10 (-355776.3387, 0.2528)
## Iteration: 20 (-355703.8680, 0.2484)
## Iteration: 30 (-355633.2127, 0.2439)
## Iteration: 40 (-355564.2574, 0.2395)
## Iteration: 50 (-355496.9354, 0.2353)

```

```

## Group probs = (0.6716, 0.2806, 0.0478)
##
## Outer iteration: 12
## Iteration: 1 (-355185.0432, 1.6870)
## Iteration: 10 (-355117.0690, 0.2410)
## Iteration: 20 (-355045.3228, 0.2375)
## Iteration: 30 (-354975.7529, 0.2333)
## Iteration: 40 (-354908.1109, 0.2292)
## Iteration: 50 (-354842.2725, 0.2251)
## Group probs = (0.6676, 0.2844, 0.0480)
##
## Outer iteration: 13
## Iteration: 1 (-351765.0696, 0.5359)
## Iteration: 10 (-351702.5139, 0.2284)
## Iteration: 20 (-351635.8915, 0.2244)
## Iteration: 30 (-351571.2215, 0.2200)
## Iteration: 40 (-351508.3008, 0.2159)
## Iteration: 50 (-351447.0136, 0.2120)
## Group probs = (0.6676, 0.2846, 0.0478)
##
## Outer iteration: 14
## Iteration: 1 (-351722.9542, 1.1800)
## Iteration: 10 (-351664.5198, 0.2147)
## Iteration: 20 (-351602.0336, 0.2107)
## Iteration: 30 (-351541.3019, 0.2068)
## Iteration: 40 (-351482.1735, 0.2030)
## Iteration: 50 (-351424.5547, 0.1995)
## Group probs = (0.6655, 0.2861, 0.0484)
##
## Outer iteration: 15
## Iteration: 1 (-349424.6964, 0.7775)
## Iteration: 10 (-349369.3353, 0.2030)
## Iteration: 20 (-349309.6996, 0.1995)
## Iteration: 30 (-349251.6567, 0.1960)
## Iteration: 40 (-349195.0976, 0.1927)
## Iteration: 50 (-349139.9434, 0.1895)
## Group probs = (0.6631, 0.2881, 0.0488)
##
## Outer iteration: 16
## Iteration: 1 (-347292.1948, 0.7447)
## Iteration: 10 (-347240.5527, 0.1920)
## Iteration: 20 (-347184.8145, 0.1885)
## Iteration: 30 (-347130.4955, 0.1853)
## Iteration: 40 (-347077.5019, 0.1822)
## Iteration: 50 (-347025.7681, 0.1793)
## Group probs = (0.6589, 0.2915, 0.0496)
##
## Outer iteration: 17
## Iteration: 1 (-343899.5159, 0.6500)
## Iteration: 10 (-343850.2889, 0.1838)
## Iteration: 20 (-343797.7595, 0.1804)
## Iteration: 30 (-343746.6744, 0.1771)
## Iteration: 40 (-343696.8723, 0.1740)
## Iteration: 50 (-343648.2641, 0.1712)

```

```
## Group probs = (0.6579, 0.2923, 0.0498)
##
## Outer iteration: 18
## Iteration: 1 (-342808.7725, 1.3568)
## Iteration: 10 (-342761.9727, 0.1734)
## Iteration: 20 (-342712.5927, 0.1713)
## Iteration: 30 (-342664.6538, 0.1686)
## Iteration: 40 (-342617.9362, 0.1660)
## Iteration: 50 (-342572.3323, 0.1634)
## Group probs = (0.6547, 0.2947, 0.0506)
##
## Outer iteration: 19
## Iteration: 1 (-339780.4302, 1.2794)
## Iteration: 10 (-339737.4208, 0.1655)
## Iteration: 20 (-339691.3222, 0.1620)
## Iteration: 30 (-339646.3325, 0.1593)
## Iteration: 40 (-339602.3559, 0.1568)
## Iteration: 50 (-339559.3325, 0.1545)
## Group probs = (0.6545, 0.2949, 0.0506)
##
## Outer iteration: 20
## Iteration: 1 (-339337.5203, 0.7500)
## Iteration: 10 (-339297.5391, 0.1564)
## Iteration: 20 (-339254.3922, 0.1544)
## Iteration: 30 (-339212.2157, 0.1522)
## Iteration: 40 (-339170.9368, 0.1501)
## Iteration: 50 (-339130.5094, 0.1480)
## Group probs = (0.6548, 0.2945, 0.0508)
##
## Outer iteration: 21
## Iteration: 1 (-339147.2898, 0.4627)
## Iteration: 10 (-339110.0337, 0.1507)
## Iteration: 20 (-339069.9089, 0.1486)
## Iteration: 30 (-339030.7046, 0.1463)
## Iteration: 40 (-338992.3277, 0.1442)
## Iteration: 50 (-338954.7248, 0.1421)
## Group probs = (0.6571, 0.2926, 0.0503)
##
## Outer iteration: 22
## Iteration: 1 (-340517.0106, 0.6817)
## Iteration: 10 (-340481.9089, 0.1420)
## Iteration: 20 (-340444.1335, 0.1401)
## Iteration: 30 (-340407.1693, 0.1383)
## Iteration: 40 (-340370.9468, 0.1366)
## Iteration: 50 (-340335.4245, 0.1349)
## Group probs = (0.6577, 0.2921, 0.0502)
##
## Outer iteration: 23
## Iteration: 1 (-340789.8518, 0.3191)
## Iteration: 10 (-340757.3882, 0.1345)
## Iteration: 20 (-340722.2821, 0.1328)
## Iteration: 30 (-340687.8804, 0.1313)
## Iteration: 40 (-340654.1222, 0.1297)
## Iteration: 50 (-340620.9713, 0.1283)
```

```
## Group probs = (0.6571, 0.2921, 0.0508)
##
## Outer iteration: 24
## Iteration: 1 (-340063.8368, 0.6762)
## Iteration: 10 (-340033.3706, 0.1295)
## Iteration: 20 (-340000.5098, 0.1279)
## Iteration: 30 (-339968.3025, 0.1263)
## Iteration: 40 (-339936.6861, 0.1248)
## Iteration: 50 (-339905.6264, 0.1233)
## Group probs = (0.6544, 0.2945, 0.0511)
##
## Outer iteration: 25
## Iteration: 1 (-337529.9674, 0.9814)
## Iteration: 10 (-337501.3183, 0.1239)
## Iteration: 20 (-337470.3757, 0.1226)
## Iteration: 30 (-337440.0340, 0.1211)
## Iteration: 40 (-337410.2400, 0.1197)
## Iteration: 50 (-337380.9626, 0.1184)
## Group probs = (0.6513, 0.2974, 0.0513)
##
## Outer iteration: 26
## Iteration: 1 (-335060.9926, 1.2993)
## Iteration: 10 (-335034.4847, 0.1185)
## Iteration: 20 (-335005.9906, 0.1168)
## Iteration: 30 (-334978.0680, 0.1153)
## Iteration: 40 (-334950.6438, 0.1139)
## Iteration: 50 (-334923.6790, 0.1126)
## Group probs = (0.6483, 0.3006, 0.0511)
##
## Outer iteration: 27
## Iteration: 1 (-332858.7333, 0.5698)
## Iteration: 10 (-332833.5161, 0.1140)
## Iteration: 20 (-332806.8796, 0.1121)
## Iteration: 30 (-332780.8428, 0.1104)
## Iteration: 40 (-332755.2700, 0.1090)
## Iteration: 50 (-332730.1068, 0.1077)
## Group probs = (0.6476, 0.3017, 0.0507)
##
## Outer iteration: 28
## Iteration: 1 (-332454.0478, 0.1792)
## Iteration: 10 (-332431.6716, 0.1062)
## Iteration: 20 (-332407.3187, 0.1048)
## Iteration: 30 (-332383.3289, 0.1037)
## Iteration: 40 (-332359.6788, 0.1026)
## Iteration: 50 (-332336.3538, 0.1017)
## Group probs = (0.6483, 0.3008, 0.0508)
##
## Outer iteration: 29
## Iteration: 1 (-332827.3096, 1.3930)
## Iteration: 10 (-332805.7648, 0.1016)
## Iteration: 20 (-332782.7451, 0.1005)
## Iteration: 30 (-332760.1361, 0.0995)
## Iteration: 40 (-332737.8707, 0.0986)
## Iteration: 50 (-332715.9186, 0.0976)
```



```
## Group probs = (0.6496, 0.2998, 0.0506)
##
## Outer iteration: 28
## Iteration: 1 (-332556.9799, 1.1174)
## Iteration: 10 (-332532.1495, 0.1074)
## Iteration: 20 (-332506.6600, 0.1066)
## Iteration: 30 (-332481.7752, 0.1054)
## Iteration: 40 (-332457.3483, 0.1043)
## Iteration: 50 (-332433.3252, 0.1032)
## Group probs = (0.6517, 0.2984, 0.0500)
##
## Outer iteration: 29
## Iteration: 1 (-333581.1186, 0.7490)
## Iteration: 10 (-333558.9001, 0.1010)
## Iteration: 20 (-333534.9623, 0.1006)
## Iteration: 30 (-333511.4081, 0.1000)
## Iteration: 40 (-333488.1899, 0.0992)
## Iteration: 50 (-333465.2881, 0.0985)
## Group probs = (0.6533, 0.2974, 0.0493)
##
## Outer iteration: 30
## Iteration: 1 (-334868.2869, 0.6650)
## Iteration: 10 (-334847.6761, 0.0986)
## Iteration: 20 (-334825.3525, 0.0975)
## Iteration: 30 (-334803.3462, 0.0965)
## Iteration: 40 (-334781.6307, 0.0956)
## Iteration: 50 (-334760.1925, 0.0948)
## Group probs = (0.6526, 0.2982, 0.0492)
##
## Outer iteration: 31
## Iteration: 1 (-334131.3990, 0.4012)
## Iteration: 10 (-334111.8798, 0.0938)
## Iteration: 20 (-334090.8375, 0.0929)
## Iteration: 30 (-334070.1275, 0.0922)
## Iteration: 40 (-334049.6971, 0.0914)
## Iteration: 50 (-334029.5251, 0.0907)
## Group probs = (0.6504, 0.3003, 0.0493)
##
## Outer iteration: 32
## Iteration: 1 (-332560.8892, 0.3004)
## Iteration: 10 (-332542.6635, 0.0907)
## Iteration: 20 (-332522.9580, 0.0898)
## Iteration: 30 (-332503.5117, 0.0890)
## Iteration: 40 (-332484.2968, 0.0883)
## Iteration: 50 (-332465.3013, 0.0876)
## Group probs = (0.6502, 0.3006, 0.0492)
##
## Outer iteration: 33
## Iteration: 1 (-332322.5075, 0.2897)
## Iteration: 10 (-332304.9959, 0.0865)
## Iteration: 20 (-332286.0674, 0.0858)
## Iteration: 30 (-332267.4073, 0.0852)
## Iteration: 40 (-332248.9737, 0.0846)
## Iteration: 50 (-332230.7506, 0.0840)
```

```
## Group probs = (0.6434, 0.3070, 0.0496)
##
## Outer iteration: 34
## Iteration: 1 (-327492.4769, 0.5631)
## Iteration: 10 (-327476.1146, 0.0848)
## Iteration: 20 (-327458.6883, 0.0833)
## Iteration: 30 (-327441.5379, 0.0823)
## Iteration: 40 (-327424.6031, 0.0815)
## Iteration: 50 (-327407.8609, 0.0808)
## Group probs = (0.6459, 0.3047, 0.0494)
##
## Outer iteration: 35
## Iteration: 1 (-329406.5715, 0.7845)
## Iteration: 10 (-329391.2617, 0.0807)
## Iteration: 20 (-329374.6768, 0.0801)
## Iteration: 30 (-329358.2947, 0.0796)
## Iteration: 40 (-329342.0890, 0.0790)
## Iteration: 50 (-329326.0485, 0.0784)
## Group probs = (0.6471, 0.3033, 0.0496)
##
## Outer iteration: 36
## Iteration: 1 (-330156.6234, 0.4965)
## Iteration: 10 (-330140.6301, 0.0805)
## Iteration: 20 (-330123.8358, 0.0802)
## Iteration: 30 (-330107.3836, 0.0796)
## Iteration: 40 (-330091.1811, 0.0788)
## Iteration: 50 (-330075.1891, 0.0781)
## Group probs = (0.6500, 0.3007, 0.0494)
##
## Outer iteration: 37
## Iteration: 1 (-332036.1924, 0.5417)
## Iteration: 10 (-332021.8737, 0.0764)
## Iteration: 20 (-332006.5823, 0.0756)
## Iteration: 30 (-331991.4687, 0.0750)
## Iteration: 40 (-331976.5049, 0.0744)
## Iteration: 50 (-331961.6815, 0.0739)
## Group probs = (0.6445, 0.3055, 0.0500)
##
## Outer iteration: 38
## Iteration: 1 (-328032.3141, 0.8112)
## Iteration: 10 (-328018.7728, 0.0739)
## Iteration: 20 (-328004.2201, 0.0732)
## Iteration: 30 (-327989.8386, 0.0726)
## Iteration: 40 (-327975.6010, 0.0720)
## Iteration: 50 (-327961.4973, 0.0715)
## Group probs = (0.6418, 0.3086, 0.0497)
##
## Outer iteration: 39
## Iteration: 1 (-326244.8609, 0.8577)
## Iteration: 10 (-326231.8260, 0.0712)
## Iteration: 20 (-326217.7935, 0.0706)
## Iteration: 30 (-326203.9628, 0.0701)
## Iteration: 40 (-326190.2943, 0.0696)
## Iteration: 50 (-326176.7710, 0.0691)
```

```

## Group probs = (0.6442, 0.3058, 0.0499)
##
## Outer iteration: 40
## Iteration: 1 (-327729.3866, 0.3580)
## Iteration: 10 (-327716.7845, 0.0692)
## Iteration: 20 (-327703.4420, 0.0688)
## Iteration: 30 (-327690.2992, 0.0683)
## Iteration: 40 (-327677.3111, 0.0678)
## Iteration: 50 (-327664.4601, 0.0673)
## Group probs = (0.6411, 0.3085, 0.0503)
##
## Outer iteration: 1
## Iteration: 1 (-394206.6529,   Inf)
## Iteration: 10 (-347242.8147, 8.6162)
## Iteration: 20 (-341296.9979, 4.2661)
## Iteration: 30 (-338704.9062, 2.8691)
## Iteration: 40 (-337124.0298, 2.1874)
## Iteration: 50 (-335997.6537, 1.7875)
## Group probs = (0.6606, 0.2930, 0.0465)
##
## Outer iteration: 2
## Iteration: 1 (-355292.7325, 2.5215)
## Iteration: 10 (-354736.7040, 1.2770)
## Iteration: 20 (-354296.8333, 1.0851)
## Iteration: 30 (-353942.1750, 0.9557)
## Iteration: 40 (-353643.5865, 0.8590)
## Iteration: 50 (-353385.5034, 0.7829)
## Group probs = (0.6643, 0.2905, 0.0451)
##
## Outer iteration: 3
## Iteration: 1 (-355684.4413, 1.9817)
## Iteration: 10 (-355467.4054, 0.7354)
## Iteration: 20 (-355255.6558, 0.6803)
## Iteration: 30 (-355065.6078, 0.6344)
## Iteration: 40 (-354893.1861, 0.5951)
## Iteration: 50 (-354735.4972, 0.5608)
## Group probs = (0.6666, 0.2887, 0.0447)
##
## Outer iteration: 4
## Iteration: 1 (-356398.3888, 0.6450)
## Iteration: 10 (-356256.0089, 0.5495)
## Iteration: 20 (-356110.1204, 0.5221)
## Iteration: 30 (-355974.8391, 0.4966)
## Iteration: 40 (-355848.7704, 0.4735)
## Iteration: 50 (-355730.7937, 0.4525)
## Group probs = (0.6646, 0.2911, 0.0443)
##
## Outer iteration: 5
## Iteration: 1 (-354214.4173, 1.0257)
## Iteration: 10 (-354106.1481, 0.4471)
## Iteration: 20 (-353993.8836, 0.4293)
## Iteration: 30 (-353888.1862, 0.4123)
## Iteration: 40 (-353788.2829, 0.3966)
## Iteration: 50 (-353693.5660, 0.3821)

```

```
## Group probs = (0.6683, 0.2875, 0.0442)
##
## Outer iteration: 6
## Iteration: 1 (-356266.1664, 0.6721)
## Iteration: 10 (-356175.9100, 0.3824)
## Iteration: 20 (-356081.3986, 0.3707)
## Iteration: 30 (-355991.5086, 0.3586)
## Iteration: 40 (-355905.7128, 0.3471)
## Iteration: 50 (-355823.6155, 0.3363)
## Group probs = (0.6694, 0.2861, 0.0444)
##
## Outer iteration: 7
## Iteration: 1 (-356544.5068, 0.4702)
## Iteration: 10 (-356465.9118, 0.3389)
## Iteration: 20 (-356383.4098, 0.3294)
## Iteration: 30 (-356304.4725, 0.3198)
## Iteration: 40 (-356228.6475, 0.3107)
## Iteration: 50 (-356155.6310, 0.3022)
## Group probs = (0.6710, 0.2845, 0.0445)
##
## Outer iteration: 8
## Iteration: 1 (-357118.0112, 0.6064)
## Iteration: 10 (-357047.7173, 0.3046)
## Iteration: 20 (-356973.5452, 0.2974)
## Iteration: 30 (-356902.1576, 0.2898)
## Iteration: 40 (-356833.2019, 0.2826)
## Iteration: 50 (-356766.4476, 0.2757)
## Group probs = (0.6725, 0.2830, 0.0446)
##
## Outer iteration: 9
## Iteration: 1 (-357831.8810, 0.5183)
## Iteration: 10 (-357768.1285, 0.2765)
## Iteration: 20 (-357700.4052, 0.2708)
## Iteration: 30 (-357634.7912, 0.2648)
## Iteration: 40 (-357571.0371, 0.2590)
## Iteration: 50 (-357508.9835, 0.2534)
## Group probs = (0.6710, 0.2839, 0.0451)
##
## Outer iteration: 10
## Iteration: 1 (-356381.4542, 0.2833)
## Iteration: 10 (-356321.7154, 0.2563)
## Iteration: 20 (-356258.0251, 0.2512)
## Iteration: 30 (-356196.1526, 0.2459)
## Iteration: 40 (-356135.8489, 0.2410)
## Iteration: 50 (-356076.9668, 0.2364)
## Group probs = (0.6717, 0.2824, 0.0458)
##
## Outer iteration: 11
## Iteration: 1 (-356305.8069, 0.9100)
## Iteration: 10 (-356247.3675, 0.2414)
## Iteration: 20 (-356185.1877, 0.2369)
## Iteration: 30 (-356124.6628, 0.2324)
## Iteration: 40 (-356065.5526, 0.2281)
## Iteration: 50 (-356007.7229, 0.2240)
```

```
## Group probs = (0.6708, 0.2825, 0.0466)
##
## Outer iteration: 12
## Iteration: 1 (-355128.1186, 0.5408)
## Iteration: 10 (-355071.9986, 0.2286)
## Iteration: 20 (-355011.3369, 0.2247)
## Iteration: 30 (-354952.0207, 0.2207)
## Iteration: 40 (-354893.9303, 0.2170)
## Iteration: 50 (-354836.9897, 0.2134)
## Group probs = (0.6693, 0.2836, 0.0471)
##
## Outer iteration: 13
## Iteration: 1 (-353829.5903, 0.5768)
## Iteration: 10 (-353775.3122, 0.2168)
## Iteration: 20 (-353716.7366, 0.2131)
## Iteration: 30 (-353659.3991, 0.2095)
## Iteration: 40 (-353603.2084, 0.2060)
## Iteration: 50 (-353548.1134, 0.2028)
## Group probs = (0.6658, 0.2861, 0.0481)
##
## Outer iteration: 14
## Iteration: 1 (-350229.9296, 1.4862)
## Iteration: 10 (-350174.6219, 0.2079)
## Iteration: 20 (-350115.4412, 0.2050)
## Iteration: 30 (-350057.6559, 0.2017)
## Iteration: 40 (-350001.1202, 0.1986)
## Iteration: 50 (-349945.7654, 0.1955)
## Group probs = (0.6686, 0.2833, 0.0481)
##
## Outer iteration: 15
## Iteration: 1 (-352058.7330, 0.4726)
## Iteration: 10 (-352004.6881, 0.1991)
## Iteration: 20 (-351946.5158, 0.1964)
## Iteration: 30 (-351889.7769, 0.1933)
## Iteration: 40 (-351834.3660, 0.1903)
## Iteration: 50 (-351780.2174, 0.1873)
## Group probs = (0.6663, 0.2851, 0.0487)
##
## Outer iteration: 16
## Iteration: 1 (-349804.8657, 0.8023)
## Iteration: 10 (-349752.0264, 0.1936)
## Iteration: 20 (-349695.4328, 0.1903)
## Iteration: 30 (-349640.3317, 0.1868)
## Iteration: 40 (-349586.5709, 0.1836)
## Iteration: 50 (-349534.0631, 0.1805)
## Group probs = (0.6604, 0.2902, 0.0494)
##
## Outer iteration: 17
## Iteration: 1 (-345069.8300, 0.8851)
## Iteration: 10 (-345020.1707, 0.1839)
## Iteration: 20 (-344966.9370, 0.1799)
## Iteration: 30 (-344915.0525, 0.1765)
## Iteration: 40 (-344864.3798, 0.1734)
## Iteration: 50 (-344814.8399, 0.1706)
```

```
## Group probs = (0.6595, 0.2910, 0.0495)
##
## Outer iteration: 18
## Iteration: 1 (-343861.9679, 0.4771)
## Iteration: 10 (-343815.6304, 0.1725)
## Iteration: 20 (-343765.5228, 0.1696)
## Iteration: 30 (-343716.5795, 0.1668)
## Iteration: 40 (-343668.7163, 0.1642)
## Iteration: 50 (-343621.8766, 0.1617)
## Group probs = (0.6552, 0.2951, 0.0497)
##
## Outer iteration: 19
## Iteration: 1 (-340453.8329, 1.0022)
## Iteration: 10 (-340409.2337, 0.1645)
## Iteration: 20 (-340361.7843, 0.1619)
## Iteration: 30 (-340315.5472, 0.1592)
## Iteration: 40 (-340270.3545, 0.1567)
## Iteration: 50 (-340226.1243, 0.1543)
## Group probs = (0.6503, 0.2996, 0.0501)
##
## Outer iteration: 20
## Iteration: 1 (-336694.2333, 1.3464)
## Iteration: 10 (-336652.1760, 0.1580)
## Iteration: 20 (-336607.2570, 0.1550)
## Iteration: 30 (-336563.4261, 0.1523)
## Iteration: 40 (-336520.5510, 0.1499)
## Iteration: 50 (-336478.5633, 0.1476)
## Group probs = (0.6504, 0.2988, 0.0509)
##
## Outer iteration: 21
## Iteration: 1 (-335688.0693, 1.4090)
## Iteration: 10 (-335647.9755, 0.1515)
## Iteration: 20 (-335605.2256, 0.1491)
## Iteration: 30 (-335563.4576, 0.1468)
## Iteration: 40 (-335522.5735, 0.1446)
## Iteration: 50 (-335482.5194, 0.1425)
## Group probs = (0.6517, 0.2983, 0.0500)
##
## Outer iteration: 22
## Iteration: 1 (-336701.8417, 0.5530)
## Iteration: 10 (-336665.3012, 0.1416)
## Iteration: 20 (-336625.7863, 0.1398)
## Iteration: 30 (-336587.0649, 0.1380)
## Iteration: 40 (-336549.0835, 0.1364)
## Iteration: 50 (-336511.8082, 0.1347)
## Group probs = (0.6542, 0.2956, 0.0503)
##
## Outer iteration: 23
## Iteration: 1 (-337651.2712, 0.9776)
## Iteration: 10 (-337615.6150, 0.1338)
## Iteration: 20 (-337577.3313, 0.1335)
## Iteration: 30 (-337539.8328, 0.1324)
## Iteration: 40 (-337503.0553, 0.1311)
## Iteration: 50 (-337466.9630, 0.1298)
```

```
## Group probs = (0.6489, 0.3007, 0.0504)
##
## Outer iteration: 24
## Iteration: 1 (-333845.0661, 0.3449)
## Iteration: 10 (-333812.9217, 0.1301)
## Iteration: 20 (-333778.4511, 0.1278)
## Iteration: 30 (-333744.6689, 0.1260)
## Iteration: 40 (-333711.4984, 0.1244)
## Iteration: 50 (-333678.9037, 0.1230)
## Group probs = (0.6499, 0.3003, 0.0497)
##
## Outer iteration: 25
## Iteration: 1 (-334825.4606, 2.1960)
## Iteration: 10 (-334794.3384, 0.1251)
## Iteration: 20 (-334762.0173, 0.1233)
## Iteration: 30 (-334730.4775, 0.1215)
## Iteration: 40 (-334699.5655, 0.1199)
## Iteration: 50 (-334669.2213, 0.1185)
## Group probs = (0.6489, 0.3015, 0.0497)
##
## Outer iteration: 26
## Iteration: 1 (-334023.1647, 0.3303)
## Iteration: 10 (-333996.0270, 0.1179)
## Iteration: 20 (-333966.5184, 0.1164)
## Iteration: 30 (-333937.5316, 0.1150)
## Iteration: 40 (-333909.0317, 0.1137)
## Iteration: 50 (-333880.9955, 0.1125)
## Group probs = (0.6497, 0.3009, 0.0494)
##
## Outer iteration: 27
## Iteration: 1 (-334505.5762, 0.3132)
## Iteration: 10 (-334479.7688, 0.1125)
## Iteration: 20 (-334451.6872, 0.1115)
## Iteration: 30 (-334424.0791, 0.1104)
## Iteration: 40 (-334396.9155, 0.1094)
## Iteration: 50 (-334370.1763, 0.1083)
## Group probs = (0.6545, 0.2959, 0.0496)
##
## Outer iteration: 28
## Iteration: 1 (-337465.8188, 0.6353)
## Iteration: 10 (-337441.0190, 0.1071)
## Iteration: 20 (-337414.1438, 0.1068)
## Iteration: 30 (-337387.7214, 0.1061)
## Iteration: 40 (-337361.7148, 0.1053)
## Iteration: 50 (-337336.1028, 0.1044)
## Group probs = (0.6511, 0.2994, 0.0495)
##
## Outer iteration: 29
## Iteration: 1 (-335167.4618, 0.6729)
## Iteration: 10 (-335144.9474, 0.1046)
## Iteration: 20 (-335120.4837, 0.1033)
## Iteration: 30 (-335096.3817, 0.1022)
## Iteration: 40 (-335072.6161, 0.1012)
## Iteration: 50 (-335049.1729, 0.1003)
```

```
## Group probs = (0.6470, 0.3026, 0.0504)
##
## Outer iteration: 30
## Iteration: 1 (-331824.2544, 0.4628)
## Iteration: 10 (-331800.9490, 0.1024)
## Iteration: 20 (-331776.8600, 0.1012)
## Iteration: 30 (-331753.3777, 0.0999)
## Iteration: 40 (-331730.3321, 0.0988)
## Iteration: 50 (-331707.6569, 0.0977)
## Group probs = (0.6457, 0.3040, 0.0504)
##
## Outer iteration: 31
## Iteration: 1 (-330839.6842, 0.3091)
## Iteration: 10 (-330819.4839, 0.0972)
## Iteration: 20 (-330797.6107, 0.0958)
## Iteration: 30 (-330776.0608, 0.0947)
## Iteration: 40 (-330754.8036, 0.0938)
## Iteration: 50 (-330733.8221, 0.0930)
## Group probs = (0.6459, 0.3037, 0.0505)
##
## Outer iteration: 32
## Iteration: 1 (-330882.6840, 0.1633)
## Iteration: 10 (-330862.9926, 0.0917)
## Iteration: 20 (-330842.0296, 0.0910)
## Iteration: 30 (-330821.4624, 0.0903)
## Iteration: 40 (-330801.1963, 0.0896)
## Iteration: 50 (-330781.1964, 0.0889)
## Group probs = (0.6495, 0.3003, 0.0501)
##
## Outer iteration: 33
## Iteration: 1 (-333284.4405, 1.0059)
## Iteration: 10 (-333265.4304, 0.0891)
## Iteration: 20 (-333245.0669, 0.0888)
## Iteration: 30 (-333225.0042, 0.0883)
## Iteration: 40 (-333205.1944, 0.0878)
## Iteration: 50 (-333185.6202, 0.0872)
## Group probs = (0.6490, 0.3005, 0.0505)
##
## Outer iteration: 34
## Iteration: 1 (-332503.3831, 1.1442)
## Iteration: 10 (-332485.6886, 0.0865)
## Iteration: 20 (-332466.7626, 0.0860)
## Iteration: 30 (-332448.0986, 0.0853)
## Iteration: 40 (-332429.6564, 0.0847)
## Iteration: 50 (-332411.4216, 0.0841)
## Group probs = (0.6468, 0.3030, 0.0502)
##
## Outer iteration: 35
## Iteration: 1 (-331357.8327, 1.2827)
## Iteration: 10 (-331341.2104, 0.0844)
## Iteration: 20 (-331323.3095, 0.0832)
## Iteration: 30 (-331305.6663, 0.0824)
## Iteration: 40 (-331288.2435, 0.0816)
## Iteration: 50 (-331271.0249, 0.0810)
```

```

## Group probs = (0.6470, 0.3029, 0.0501)
##
## Outer iteration: 36
## Iteration: 1 (-331266.4003, 0.3337)
## Iteration: 10 (-331250.5391, 0.0810)
## Iteration: 20 (-331233.3684, 0.0809)
## Iteration: 30 (-331216.4277, 0.0804)
## Iteration: 40 (-331199.6893, 0.0798)
## Iteration: 50 (-331183.1401, 0.0792)
## Group probs = (0.6474, 0.3028, 0.0498)
##
## Outer iteration: 37
## Iteration: 1 (-331685.1926, 0.9616)
## Iteration: 10 (-331669.1150, 0.0820)
## Iteration: 20 (-331652.2895, 0.0808)
## Iteration: 30 (-331635.8289, 0.0797)
## Iteration: 40 (-331619.6365, 0.0788)
## Iteration: 50 (-331603.6721, 0.0780)
## Group probs = (0.6438, 0.3058, 0.0504)
##
## Outer iteration: 38
## Iteration: 1 (-328978.1061, 0.9553)
## Iteration: 10 (-328963.2292, 0.0783)
## Iteration: 20 (-328947.4457, 0.0768)
## Iteration: 30 (-328931.9210, 0.0758)
## Iteration: 40 (-328916.6032, 0.0750)
## Iteration: 50 (-328901.4712, 0.0743)
## Group probs = (0.6437, 0.3056, 0.0507)
##
## Outer iteration: 39
## Iteration: 1 (-328427.2474, 2.4586)
## Iteration: 10 (-328412.1734, 0.0731)
## Iteration: 20 (-328397.0815, 0.0728)
## Iteration: 30 (-328382.3061, 0.0724)
## Iteration: 40 (-328367.7341, 0.0720)
## Iteration: 50 (-328353.3281, 0.0715)
## Group probs = (0.6457, 0.3039, 0.0505)
##
## Outer iteration: 40
## Iteration: 1 (-329826.8920, 1.0650)
## Iteration: 10 (-329812.8274, 0.0713)
## Iteration: 20 (-329798.2588, 0.0707)
## Iteration: 30 (-329783.9914, 0.0702)
## Iteration: 40 (-329769.9290, 0.0697)
## Iteration: 50 (-329756.0361, 0.0693)
## Group probs = (0.6511, 0.2990, 0.0499)
##
## Outer iteration: 1
## Iteration: 1 (-393330.3494, Inf)
## Iteration: 10 (-346365.4009, 8.6033)
## Iteration: 20 (-340427.9750, 4.2603)
## Iteration: 30 (-337837.7410, 2.8666)
## Iteration: 40 (-336257.4054, 2.1862)
## Iteration: 50 (-335131.1480, 1.7870)

```

```

## Group probs = (0.6551, 0.2986, 0.0463)
##
## Outer iteration: 2
## Iteration: 1 (-350531.2297, 2.0440)
## Iteration: 10 (-349981.5002, 1.2729)
## Iteration: 20 (-349544.4309, 1.0829)
## Iteration: 30 (-349190.8875, 0.9551)
## Iteration: 40 (-348892.5228, 0.8594)
## Iteration: 50 (-348634.1628, 0.7840)
## Group probs = (0.6666, 0.2887, 0.0446)
##
## Outer iteration: 3
## Iteration: 1 (-356611.7003, 0.8983)
## Iteration: 10 (-356390.7215, 0.7372)
## Iteration: 20 (-356176.2290, 0.6832)
## Iteration: 30 (-355983.5547, 0.6376)
## Iteration: 40 (-355808.5444, 0.5984)
## Iteration: 50 (-355648.2923, 0.5642)
## Group probs = (0.6730, 0.2831, 0.0439)
##
## Outer iteration: 4
## Iteration: 1 (-359933.7965, 0.7059)
## Iteration: 10 (-359786.1935, 0.5557)
## Iteration: 20 (-359635.1902, 0.5287)
## Iteration: 30 (-359495.0366, 0.5032)
## Iteration: 40 (-359364.2537, 0.4799)
## Iteration: 50 (-359241.6742, 0.4587)
## Group probs = (0.6751, 0.2815, 0.0433)
##
## Outer iteration: 5
## Iteration: 1 (-360337.8778, 1.0127)
## Iteration: 10 (-360223.1907, 0.4547)
## Iteration: 20 (-360104.2949, 0.4378)
## Iteration: 30 (-359992.2007, 0.4209)
## Iteration: 40 (-359886.0292, 0.4052)
## Iteration: 50 (-359785.1292, 0.3906)
## Group probs = (0.6749, 0.2821, 0.0430)
##
## Outer iteration: 6
## Iteration: 1 (-359530.2904, 0.5851)
## Iteration: 10 (-359433.4477, 0.3931)
## Iteration: 20 (-359331.9456, 0.3805)
## Iteration: 30 (-359235.1603, 0.3681)
## Iteration: 40 (-359142.5226, 0.3564)
## Iteration: 50 (-359053.6232, 0.3455)
## Group probs = (0.6763, 0.2807, 0.0430)
##
## Outer iteration: 7
## Iteration: 1 (-360037.2669, 0.5999)
## Iteration: 10 (-359951.3032, 0.3483)
## Iteration: 20 (-359860.6847, 0.3392)
## Iteration: 30 (-359773.6263, 0.3297)
## Iteration: 40 (-359689.6906, 0.3207)
## Iteration: 50 (-359608.5848, 0.3123)

```

```
## Group probs = (0.6765, 0.2801, 0.0434)
##
## Outer iteration: 8
## Iteration: 1 (-359429.7004, 0.8273)
## Iteration: 10 (-359349.0059, 0.3184)
## Iteration: 20 (-359264.1770, 0.3107)
## Iteration: 30 (-359182.4081, 0.3028)
## Iteration: 40 (-359103.2483, 0.2954)
## Iteration: 50 (-359026.4367, 0.2885)
## Group probs = (0.6753, 0.2807, 0.0440)
##
## Outer iteration: 9
## Iteration: 1 (-357988.4210, 0.4007)
## Iteration: 10 (-357913.6312, 0.2932)
## Iteration: 20 (-357834.2931, 0.2864)
## Iteration: 30 (-357757.4734, 0.2797)
## Iteration: 40 (-357682.8333, 0.2735)
## Iteration: 50 (-357610.1763, 0.2677)
## Group probs = (0.6773, 0.2787, 0.0441)
##
## Outer iteration: 10
## Iteration: 1 (-359200.9887, 0.8738)
## Iteration: 10 (-359129.6126, 0.2729)
## Iteration: 20 (-359052.9744, 0.2677)
## Iteration: 30 (-358978.4208, 0.2623)
## Iteration: 40 (-358905.7923, 0.2572)
## Iteration: 50 (-358834.9842, 0.2523)
## Group probs = (0.6739, 0.2807, 0.0454)
##
## Outer iteration: 11
## Iteration: 1 (-355971.8555, 0.8971)
## Iteration: 10 (-355901.8090, 0.2586)
## Iteration: 20 (-355826.9519, 0.2536)
## Iteration: 30 (-355754.2002, 0.2486)
## Iteration: 40 (-355683.3529, 0.2437)
## Iteration: 50 (-355614.3004, 0.2392)
## Group probs = (0.6727, 0.2816, 0.0458)
##
## Outer iteration: 12
## Iteration: 1 (-354574.3565, 0.9655)
## Iteration: 10 (-354507.3610, 0.2437)
## Iteration: 20 (-354435.4178, 0.2390)
## Iteration: 30 (-354365.4848, 0.2343)
## Iteration: 40 (-354297.4277, 0.2298)
## Iteration: 50 (-354231.1535, 0.2256)
## Group probs = (0.6709, 0.2831, 0.0460)
##
## Outer iteration: 13
## Iteration: 1 (-352899.3172, 0.6127)
## Iteration: 10 (-352836.8053, 0.2278)
## Iteration: 20 (-352769.6137, 0.2234)
## Iteration: 30 (-352704.3158, 0.2191)
## Iteration: 40 (-352640.7763, 0.2149)
## Iteration: 50 (-352578.8967, 0.2110)
```

```
## Group probs = (0.6672, 0.2866, 0.0461)
##
## Outer iteration: 14
## Iteration: 1 (-350044.7291, 0.6685)
## Iteration: 10 (-349984.6375, 0.2170)
## Iteration: 20 (-349920.6495, 0.2123)
## Iteration: 30 (-349858.5739, 0.2078)
## Iteration: 40 (-349798.1923, 0.2037)
## Iteration: 50 (-349739.3797, 0.1999)
## Group probs = (0.6642, 0.2891, 0.0467)
##
## Outer iteration: 15
## Iteration: 1 (-347323.5706, 0.8799)
## Iteration: 10 (-347267.3176, 0.2044)
## Iteration: 20 (-347206.9656, 0.2003)
## Iteration: 30 (-347148.3034, 0.1963)
## Iteration: 40 (-347091.1788, 0.1926)
## Iteration: 50 (-347035.4916, 0.1892)
## Group probs = (0.6586, 0.2937, 0.0477)
##
## Outer iteration: 16
## Iteration: 1 (-342798.0844, 0.9280)
## Iteration: 10 (-342745.3703, 0.1938)
## Iteration: 20 (-342689.3094, 0.1893)
## Iteration: 30 (-342634.9081, 0.1852)
## Iteration: 40 (-342581.9545, 0.1816)
## Iteration: 50 (-342530.3289, 0.1784)
## Group probs = (0.6602, 0.2920, 0.0478)
##
## Outer iteration: 17
## Iteration: 1 (-343483.4210, 0.4656)
## Iteration: 10 (-343435.0019, 0.1787)
## Iteration: 20 (-343382.8956, 0.1760)
## Iteration: 30 (-343332.0869, 0.1732)
## Iteration: 40 (-343282.4717, 0.1705)
## Iteration: 50 (-343233.9840, 0.1679)
## Group probs = (0.6599, 0.2918, 0.0483)
##
## Outer iteration: 18
## Iteration: 1 (-342535.2058, 0.8381)
## Iteration: 10 (-342490.1398, 0.1696)
## Iteration: 20 (-342441.3521, 0.1670)
## Iteration: 30 (-342393.6862, 0.1645)
## Iteration: 40 (-342347.0738, 0.1620)
## Iteration: 50 (-342301.4634, 0.1596)
## Group probs = (0.6580, 0.2935, 0.0484)
##
## Outer iteration: 19
## Iteration: 1 (-340900.5892, 0.2220)
## Iteration: 10 (-340858.6197, 0.1607)
## Iteration: 20 (-340813.4906, 0.1580)
## Iteration: 30 (-340769.4482, 0.1555)
## Iteration: 40 (-340726.3769, 0.1532)
## Iteration: 50 (-340684.2105, 0.1510)
```

```
## Group probs = (0.6596, 0.2918, 0.0486)
##
## Outer iteration: 20
## Iteration: 1 (-341309.4710, 1.0103)
## Iteration: 10 (-341270.1325, 0.1509)
## Iteration: 20 (-341227.5862, 0.1493)
## Iteration: 30 (-341185.9262, 0.1476)
## Iteration: 40 (-341145.0981, 0.1458)
## Iteration: 50 (-341105.0654, 0.1440)
## Group probs = (0.6600, 0.2913, 0.0487)
##
## Outer iteration: 21
## Iteration: 1 (-341191.3375, 0.4091)
## Iteration: 10 (-341155.4765, 0.1441)
## Iteration: 20 (-341116.6005, 0.1420)
## Iteration: 30 (-341078.4997, 0.1401)
## Iteration: 40 (-341041.1240, 0.1383)
## Iteration: 50 (-341004.4407, 0.1366)
## Group probs = (0.6548, 0.2966, 0.0486)
##
## Outer iteration: 22
## Iteration: 1 (-337526.4010, 0.5555)
## Iteration: 10 (-337494.0854, 0.1347)
## Iteration: 20 (-337459.1459, 0.1326)
## Iteration: 30 (-337424.8793, 0.1309)
## Iteration: 40 (-337391.2330, 0.1294)
## Iteration: 50 (-337358.1752, 0.1279)
## Group probs = (0.6540, 0.2971, 0.0490)
##
## Outer iteration: 23
## Iteration: 1 (-336372.3983, 0.8409)
## Iteration: 10 (-336341.7690, 0.1286)
## Iteration: 20 (-336308.6300, 0.1270)
## Iteration: 30 (-336276.1290, 0.1255)
## Iteration: 40 (-336244.2028, 0.1241)
## Iteration: 50 (-336212.8168, 0.1228)
## Group probs = (0.6533, 0.2976, 0.0491)
##
## Outer iteration: 24
## Iteration: 1 (-335563.2567, 1.0581)
## Iteration: 10 (-335533.6419, 0.1246)
## Iteration: 20 (-335502.0975, 0.1235)
## Iteration: 30 (-335471.1875, 0.1222)
## Iteration: 40 (-335440.8275, 0.1208)
## Iteration: 50 (-335410.9805, 0.1195)
## Group probs = (0.6521, 0.2997, 0.0482)
##
## Outer iteration: 25
## Iteration: 1 (-334951.6843, 0.8443)
## Iteration: 10 (-334925.3507, 0.1165)
## Iteration: 20 (-334896.9998, 0.1152)
## Iteration: 30 (-334869.1491, 0.1140)
## Iteration: 40 (-334841.7451, 0.1129)
## Iteration: 50 (-334814.7609, 0.1117)
```

```

## Group probs = (0.6527, 0.2991, 0.0481)
##
## Outer iteration: 26
## Iteration: 1 (-335102.1352, 0.6045)
## Iteration: 10 (-335077.3764, 0.1118)
## Iteration: 20 (-335050.5222, 0.1107)
## Iteration: 30 (-335024.1126, 0.1097)
## Iteration: 40 (-334998.1097, 0.1086)
## Iteration: 50 (-334972.4924, 0.1076)
## Group probs = (0.6495, 0.3021, 0.0485)
##
## Outer iteration: 27
## Iteration: 1 (-332774.5957, 0.7110)
## Iteration: 10 (-332751.5865, 0.1071)
## Iteration: 20 (-332726.7836, 0.1060)
## Iteration: 30 (-332702.3747, 0.1049)
## Iteration: 40 (-332678.3189, 0.1039)
## Iteration: 50 (-332654.5974, 0.1029)
## Group probs = (0.6507, 0.3011, 0.0483)
##
## Outer iteration: 28
## Iteration: 1 (-333366.7351, 0.5218)
## Iteration: 10 (-333344.7396, 0.1022)
## Iteration: 20 (-333321.1249, 0.1011)
## Iteration: 30 (-333297.8871, 0.1002)
## Iteration: 40 (-333274.9912, 0.0993)
## Iteration: 50 (-333252.4186, 0.0984)
## Group probs = (0.6504, 0.3011, 0.0485)
##
## Outer iteration: 29
## Iteration: 1 (-333025.9883, 0.2449)
## Iteration: 10 (-333005.7503, 0.0986)
## Iteration: 20 (-332983.6688, 0.0978)
## Iteration: 30 (-332961.8763, 0.0969)
## Iteration: 40 (-332940.3576, 0.0960)
## Iteration: 50 (-332919.1030, 0.0952)
## Group probs = (0.6460, 0.3057, 0.0483)
##
## Outer iteration: 30
## Iteration: 1 (-330171.0737, 0.8301)
## Iteration: 10 (-330151.5300, 0.0952)
## Iteration: 20 (-330130.6502, 0.0945)
## Iteration: 30 (-330110.1390, 0.0935)
## Iteration: 40 (-330089.9200, 0.0927)
## Iteration: 50 (-330069.9617, 0.0918)
## Group probs = (0.6504, 0.3013, 0.0483)
##
## Outer iteration: 31
## Iteration: 1 (-333001.5973, 1.0190)
## Iteration: 10 (-332982.0708, 0.0927)
## Iteration: 20 (-332961.8634, 0.0916)
## Iteration: 30 (-332942.1390, 0.0907)
## Iteration: 40 (-332922.7451, 0.0898)
## Iteration: 50 (-332903.6261, 0.0890)

```

```
## Group probs = (0.6529, 0.2985, 0.0487)
##
## Outer iteration: 32
## Iteration: 1 (-334214.2362, 1.8142)
## Iteration: 10 (-334196.1994, 0.0882)
## Iteration: 20 (-334176.8340, 0.0877)
## Iteration: 30 (-334157.7285, 0.0871)
## Iteration: 40 (-334138.8495, 0.0865)
## Iteration: 50 (-334120.1837, 0.0858)
## Group probs = (0.6541, 0.2977, 0.0482)
##
## Outer iteration: 33
## Iteration: 1 (-335299.5698, 0.8823)
## Iteration: 10 (-335282.6591, 0.0855)
## Iteration: 20 (-335264.3936, 0.0848)
## Iteration: 30 (-335246.3678, 0.0841)
## Iteration: 40 (-335228.5538, 0.0835)
## Iteration: 50 (-335210.9395, 0.0828)
## Group probs = (0.6571, 0.2952, 0.0477)
##
## Outer iteration: 34
## Iteration: 1 (-337367.6020, 1.0014)
## Iteration: 10 (-337350.7227, 0.0837)
## Iteration: 20 (-337332.7951, 0.0833)
## Iteration: 30 (-337315.1494, 0.0827)
## Iteration: 40 (-337297.7286, 0.0820)
## Iteration: 50 (-337280.5091, 0.0814)
## Group probs = (0.6543, 0.2971, 0.0485)
##
## Outer iteration: 35
## Iteration: 1 (-335109.1524, 1.0756)
## Iteration: 10 (-335093.4200, 0.0814)
## Iteration: 20 (-335076.3827, 0.0805)
## Iteration: 30 (-335059.5538, 0.0798)
## Iteration: 40 (-335042.9076, 0.0791)
## Iteration: 50 (-335026.4330, 0.0785)
## Group probs = (0.6543, 0.2969, 0.0488)
##
## Outer iteration: 36
## Iteration: 1 (-334730.1425, 1.1422)
## Iteration: 10 (-334714.9666, 0.0781)
## Iteration: 20 (-334698.6413, 0.0775)
## Iteration: 30 (-334682.5147, 0.0770)
## Iteration: 40 (-334666.5525, 0.0764)
## Iteration: 50 (-334650.7423, 0.0759)
## Group probs = (0.6552, 0.2964, 0.0483)
##
## Outer iteration: 37
## Iteration: 1 (-335674.8219, 1.2667)
## Iteration: 10 (-335659.5503, 0.0766)
## Iteration: 20 (-335643.5502, 0.0763)
## Iteration: 30 (-335627.8269, 0.0758)
## Iteration: 40 (-335612.3090, 0.0753)
## Iteration: 50 (-335596.9692, 0.0747)
```

```

## Group probs = (0.6532, 0.2979, 0.0488)
##
## Outer iteration: 38
## Iteration: 1 (-333860.0788, 1.5979)
## Iteration: 10 (-333845.0648, 0.0726)
## Iteration: 20 (-333829.7847, 0.0724)
## Iteration: 30 (-333814.8272, 0.0721)
## Iteration: 40 (-333800.0781, 0.0716)
## Iteration: 50 (-333785.4979, 0.0712)
## Group probs = (0.6505, 0.3009, 0.0486)
##
## Outer iteration: 39
## Iteration: 1 (-332217.1555, 0.8360)
## Iteration: 10 (-332203.5812, 0.0711)
## Iteration: 20 (-332189.1624, 0.0708)
## Iteration: 30 (-332174.9990, 0.0704)
## Iteration: 40 (-332161.0159, 0.0699)
## Iteration: 50 (-332147.1846, 0.0695)
## Group probs = (0.6509, 0.3002, 0.0489)
##
## Outer iteration: 40
## Iteration: 1 (-332370.6346, 0.5198)
## Iteration: 10 (-332357.6355, 0.0691)
## Iteration: 20 (-332343.7534, 0.0686)
## Iteration: 30 (-332330.0639, 0.0681)
## Iteration: 40 (-332316.5158, 0.0677)
## Iteration: 50 (-332303.0912, 0.0673)
## Group probs = (0.6519, 0.3000, 0.0481)
##
## CCES_2017
## Outer iteration: 1
## Iteration: 1 (-143954.9027, Inf)
## Iteration: 10 (-126307.0984, 4.1500)
## Iteration: 20 (-124458.1516, 1.9580)
## Iteration: 30 (-123705.9396, 1.2991)
## Iteration: 40 (-123268.7467, 0.9843)
## Iteration: 50 (-122970.5031, 0.7992)
## Group probs = (0.8347, 0.1293, 0.0360)
##
## Outer iteration: 2
## Iteration: 1 (-126786.7116, 1.5490)
## Iteration: 10 (-126607.0253, 0.6558)
## Iteration: 20 (-126449.2776, 0.5690)
## Iteration: 30 (-126318.9992, 0.5047)
## Iteration: 40 (-126208.3594, 0.4544)
## Iteration: 50 (-126112.4992, 0.4138)
## Group probs = (0.8366, 0.1278, 0.0356)
##
## Outer iteration: 3
## Iteration: 1 (-126503.4339, 0.5183)
## Iteration: 10 (-126424.4107, 0.3842)
## Iteration: 20 (-126345.9979, 0.3562)
## Iteration: 30 (-126275.4546, 0.3324)
## Iteration: 40 (-126211.4477, 0.3118)

```

```
## Iteration: 50 (-126152.9485, 0.2940)
## Group probs = (0.8387, 0.1262, 0.0351)
##
## Outer iteration: 4
## Iteration: 1 (-126701.0537, 0.3285)
## Iteration: 10 (-126650.0206, 0.2843)
## Iteration: 20 (-126597.6177, 0.2707)
## Iteration: 30 (-126549.0240, 0.2585)
## Iteration: 40 (-126503.7584, 0.2477)
## Iteration: 50 (-126461.4278, 0.2380)
## Group probs = (0.8431, 0.1227, 0.0342)
##
## Outer iteration: 5
## Iteration: 1 (-127639.3181, 0.3681)
## Iteration: 10 (-127602.0961, 0.2330)
## Iteration: 20 (-127563.3619, 0.2250)
## Iteration: 30 (-127526.8618, 0.2179)
## Iteration: 40 (-127492.3697, 0.2113)
## Iteration: 50 (-127459.6979, 0.2053)
## Group probs = (0.8431, 0.1219, 0.0351)
##
## Outer iteration: 6
## Iteration: 1 (-127377.6202, 0.2307)
## Iteration: 10 (-127349.2650, 0.2013)
## Iteration: 20 (-127319.3482, 0.1961)
## Iteration: 30 (-127290.8873, 0.1913)
## Iteration: 40 (-127263.7616, 0.1869)
## Iteration: 50 (-127237.8670, 0.1828)
## Group probs = (0.8403, 0.1232, 0.0364)
##
## Outer iteration: 7
## Iteration: 1 (-126483.5881, 0.2468)
## Iteration: 10 (-126461.0396, 0.1790)
## Iteration: 20 (-126437.2157, 0.1753)
## Iteration: 30 (-126414.4173, 0.1719)
## Iteration: 40 (-126392.5597, 0.1687)
## Iteration: 50 (-126371.5767, 0.1656)
## Group probs = (0.8419, 0.1224, 0.0357)
##
## Outer iteration: 8
## Iteration: 1 (-126846.5188, 0.3239)
## Iteration: 10 (-126827.9277, 0.1648)
## Iteration: 20 (-126808.2159, 0.1619)
## Iteration: 30 (-126789.2579, 0.1593)
## Iteration: 40 (-126770.9963, 0.1567)
## Iteration: 50 (-126753.3864, 0.1542)
## Group probs = (0.8429, 0.1214, 0.0357)
##
## Outer iteration: 9
## Iteration: 1 (-126989.3185, 0.1560)
## Iteration: 10 (-126973.8909, 0.1525)
## Iteration: 20 (-126957.3184, 0.1501)
## Iteration: 30 (-126941.2969, 0.1478)
## Iteration: 40 (-126925.7949, 0.1456)
```

```
## Iteration: 50 (-126910.7839, 0.1435)
## Group probs = (0.8398, 0.1233, 0.0369)
##
## Outer iteration: 10
## Iteration: 1 (-126057.8091, 0.2271)
## Iteration: 10 (-126044.6574, 0.1417)
## Iteration: 20 (-126030.5561, 0.1397)
## Iteration: 30 (-126016.8870, 0.1377)
## Iteration: 40 (-126003.6211, 0.1358)
## Iteration: 50 (-125990.7362, 0.1339)
## Group probs = (0.8381, 0.1245, 0.0374)
##
## Outer iteration: 11
## Iteration: 1 (-125564.5300, 0.2222)
## Iteration: 10 (-125553.1942, 0.1310)
## Iteration: 20 (-125541.0145, 0.1292)
## Iteration: 30 (-125529.1803, 0.1275)
## Iteration: 40 (-125517.6657, 0.1258)
## Iteration: 50 (-125506.4530, 0.1242)
## Group probs = (0.8369, 0.1252, 0.0378)
##
## Outer iteration: 12
## Iteration: 1 (-125233.6602, 0.1718)
## Iteration: 10 (-125223.6296, 0.1246)
## Iteration: 20 (-125212.8065, 0.1229)
## Iteration: 30 (-125202.2607, 0.1212)
## Iteration: 40 (-125191.9751, 0.1195)
## Iteration: 50 (-125181.9370, 0.1179)
## Group probs = (0.8361, 0.1259, 0.0380)
##
## Outer iteration: 13
## Iteration: 1 (-124971.9898, 0.1087)
## Iteration: 10 (-124963.1296, 0.1163)
## Iteration: 20 (-124953.5168, 0.1148)
## Iteration: 30 (-124944.1260, 0.1134)
## Iteration: 40 (-124934.9466, 0.1119)
## Iteration: 50 (-124925.9697, 0.1105)
## Group probs = (0.8367, 0.1254, 0.0379)
##
## Outer iteration: 14
## Iteration: 1 (-125086.3511, 0.1911)
## Iteration: 10 (-125078.4109, 0.1089)
## Iteration: 20 (-125069.7783, 0.1076)
## Iteration: 30 (-125061.3287, 0.1062)
## Iteration: 40 (-125053.0544, 0.1049)
## Iteration: 50 (-125044.9487, 0.1037)
## Group probs = (0.8384, 0.1242, 0.0374)
##
## Outer iteration: 15
## Iteration: 1 (-125525.6220, 0.1571)
## Iteration: 10 (-125518.3237, 0.1037)
## Iteration: 20 (-125510.4247, 0.1024)
## Iteration: 30 (-125502.6865, 0.1011)
## Iteration: 40 (-125495.0991, 0.0998)
```

```
## Iteration: 50 (-125487.6561, 0.0985)
## Group probs = (0.8385, 0.1239, 0.0376)
##
## Outer iteration: 16
## Iteration: 1 (-125481.5944, 0.1387)
## Iteration: 10 (-125474.9590, 0.0985)
## Iteration: 20 (-125467.7478, 0.0973)
## Iteration: 30 (-125460.6732, 0.0961)
## Iteration: 40 (-125453.7277, 0.0949)
## Iteration: 50 (-125446.9063, 0.0937)
## Group probs = (0.8403, 0.1224, 0.0373)
##
## Outer iteration: 17
## Iteration: 1 (-125916.4823, 0.2181)
## Iteration: 10 (-125910.3359, 0.0941)
## Iteration: 20 (-125903.6696, 0.0928)
## Iteration: 30 (-125897.1240, 0.0915)
## Iteration: 40 (-125890.6916, 0.0903)
## Iteration: 50 (-125884.3675, 0.0892)
## Group probs = (0.8408, 0.1226, 0.0367)
##
## Outer iteration: 18
## Iteration: 1 (-126073.1367, 0.2577)
## Iteration: 10 (-126067.4207, 0.0878)
## Iteration: 20 (-126061.2771, 0.0868)
## Iteration: 30 (-126055.2416, 0.0859)
## Iteration: 40 (-126049.3049, 0.0850)
## Iteration: 50 (-126043.4624, 0.0840)
## Group probs = (0.8395, 0.1234, 0.0372)
##
## Outer iteration: 19
## Iteration: 1 (-125712.4701, 0.1586)
## Iteration: 10 (-125707.2635, 0.0835)
## Iteration: 20 (-125701.5805, 0.0825)
## Iteration: 30 (-125695.9855, 0.0815)
## Iteration: 40 (-125690.4752, 0.0806)
## Iteration: 50 (-125685.0466, 0.0797)
## Group probs = (0.8395, 0.1232, 0.0373)
##
## Outer iteration: 20
## Iteration: 1 (-125705.2187, 0.2891)
## Iteration: 10 (-125700.3345, 0.0794)
## Iteration: 20 (-125695.0214, 0.0786)
## Iteration: 30 (-125689.7871, 0.0777)
## Iteration: 40 (-125684.6279, 0.0768)
## Iteration: 50 (-125679.5415, 0.0760)
## Group probs = (0.8372, 0.1248, 0.0380)
##
## Outer iteration: 21
## Iteration: 1 (-125048.8784, 0.1995)
## Iteration: 10 (-125044.2688, 0.0741)
## Iteration: 20 (-125039.3244, 0.0734)
## Iteration: 30 (-125034.4620, 0.0728)
## Iteration: 40 (-125029.6710, 0.0721)
```

```
## Iteration: 50 (-125024.9466, 0.0715)
## Group probs = (0.8399, 0.1228, 0.0373)
##
## Outer iteration: 22
## Iteration: 1 (-125706.7742, 0.1545)
## Iteration: 10 (-125702.5001, 0.0704)
## Iteration: 20 (-125697.8763, 0.0695)
## Iteration: 30 (-125693.3165, 0.0688)
## Iteration: 40 (-125688.8166, 0.0682)
## Iteration: 50 (-125684.3742, 0.0675)
## Group probs = (0.8393, 0.1230, 0.0377)
##
## Outer iteration: 23
## Iteration: 1 (-125499.3986, 0.1340)
## Iteration: 10 (-125495.4095, 0.0681)
## Iteration: 20 (-125491.0532, 0.0674)
## Iteration: 30 (-125486.7537, 0.0666)
## Iteration: 40 (-125482.5079, 0.0659)
## Iteration: 50 (-125478.3137, 0.0652)
## Group probs = (0.8387, 0.1229, 0.0384)
##
## Outer iteration: 24
## Iteration: 1 (-125331.7892, 0.1677)
## Iteration: 10 (-125327.9427, 0.0641)
## Iteration: 20 (-125323.7919, 0.0635)
## Iteration: 30 (-125319.7008, 0.0628)
## Iteration: 40 (-125315.6625, 0.0622)
## Iteration: 50 (-125311.6737, 0.0616)
## Group probs = (0.8386, 0.1227, 0.0388)
##
## Outer iteration: 25
## Iteration: 1 (-125255.6695, 0.0944)
## Iteration: 10 (-125252.0887, 0.0605)
## Iteration: 20 (-125248.1823, 0.0599)
## Iteration: 30 (-125244.3262, 0.0594)
## Iteration: 40 (-125240.5162, 0.0588)
## Iteration: 50 (-125236.7504, 0.0583)
## Group probs = (0.8394, 0.1226, 0.0380)
##
## Outer iteration: 26
## Iteration: 1 (-125475.1927, 0.2293)
## Iteration: 10 (-125471.7658, 0.0584)
## Iteration: 20 (-125468.0734, 0.0579)
## Iteration: 30 (-125464.4276, 0.0574)
## Iteration: 40 (-125460.8230, 0.0569)
## Iteration: 50 (-125457.2575, 0.0564)
## Group probs = (0.8354, 0.1257, 0.0389)
##
## Outer iteration: 27
## Iteration: 1 (-124447.3163, 0.1161)
## Iteration: 10 (-124444.0008, 0.0554)
## Iteration: 20 (-124440.5108, 0.0551)
## Iteration: 30 (-124437.0662, 0.0547)
## Iteration: 40 (-124433.6610, 0.0542)
```

```
## Iteration: 50 (-124430.2927, 0.0538)
## Group probs = (0.8357, 0.1260, 0.0383)
##
## Outer iteration: 28
## Iteration: 1 (-124551.7607, 0.1821)
## Iteration: 10 (-124548.6822, 0.0536)
## Iteration: 20 (-124545.3517, 0.0531)
## Iteration: 30 (-124542.0597, 0.0527)
## Iteration: 40 (-124538.8024, 0.0523)
## Iteration: 50 (-124535.5782, 0.0518)
## Group probs = (0.8357, 0.1258, 0.0385)
##
## Outer iteration: 29
## Iteration: 1 (-124543.1591, 0.0825)
## Iteration: 10 (-124540.2015, 0.0518)
## Iteration: 20 (-124536.9918, 0.0514)
## Iteration: 30 (-124533.8176, 0.0509)
## Iteration: 40 (-124530.6758, 0.0504)
## Iteration: 50 (-124527.5650, 0.0500)
## Group probs = (0.8369, 0.1247, 0.0384)
##
## Outer iteration: 30
## Iteration: 1 (-124807.8437, 0.0993)
## Iteration: 10 (-124805.0108, 0.0502)
## Iteration: 20 (-124801.9116, 0.0497)
## Iteration: 30 (-124798.8439, 0.0492)
## Iteration: 40 (-124795.8062, 0.0487)
## Iteration: 50 (-124792.7975, 0.0483)
## Group probs = (0.8373, 0.1244, 0.0383)
##
## Outer iteration: 31
## Iteration: 1 (-124929.2463, 0.1846)
## Iteration: 10 (-124926.4724, 0.0484)
## Iteration: 20 (-124923.4993, 0.0479)
## Iteration: 30 (-124920.5618, 0.0474)
## Iteration: 40 (-124917.6546, 0.0470)
## Iteration: 50 (-124914.7755, 0.0466)
## Group probs = (0.8365, 0.1250, 0.0385)
##
## Outer iteration: 32
## Iteration: 1 (-124717.1284, 0.1975)
## Iteration: 10 (-124714.4846, 0.0455)
## Iteration: 20 (-124711.6235, 0.0451)
## Iteration: 30 (-124708.7976, 0.0448)
## Iteration: 40 (-124706.0016, 0.0446)
## Iteration: 50 (-124703.2328, 0.0443)
## Group probs = (0.8393, 0.1230, 0.0377)
##
## Outer iteration: 33
## Iteration: 1 (-125445.3445, 0.1224)
## Iteration: 10 (-125442.7767, 0.0443)
## Iteration: 20 (-125440.0412, 0.0438)
## Iteration: 30 (-125437.3345, 0.0435)
## Iteration: 40 (-125434.6530, 0.0432)
```

```
## Iteration: 50 (-125431.9953, 0.0429)
## Group probs = (0.8388, 0.1230, 0.0382)
##
## Outer iteration: 34
## Iteration: 1 (-125236.0649, 0.1766)
## Iteration: 10 (-125233.6791, 0.0424)
## Iteration: 20 (-125231.0806, 0.0421)
## Iteration: 30 (-125228.5067, 0.0419)
## Iteration: 40 (-125225.9550, 0.0416)
## Iteration: 50 (-125223.4246, 0.0413)
## Group probs = (0.8387, 0.1229, 0.0383)
##
## Outer iteration: 35
## Iteration: 1 (-125215.6322, 0.0423)
## Iteration: 10 (-125213.3382, 0.0418)
## Iteration: 20 (-125210.8220, 0.0415)
## Iteration: 30 (-125208.3279, 0.0412)
## Iteration: 40 (-125205.8545, 0.0409)
## Iteration: 50 (-125203.4011, 0.0406)
## Group probs = (0.8384, 0.1235, 0.0381)
##
## Outer iteration: 36
## Iteration: 1 (-125190.6530, 0.3108)
## Iteration: 10 (-125188.2642, 0.0415)
## Iteration: 20 (-125185.7638, 0.0411)
## Iteration: 30 (-125183.3042, 0.0407)
## Iteration: 40 (-125180.8736, 0.0404)
## Iteration: 50 (-125178.4676, 0.0400)
## Group probs = (0.8365, 0.1247, 0.0388)
##
## Outer iteration: 37
## Iteration: 1 (-124680.5413, 0.1675)
## Iteration: 10 (-124678.3172, 0.0391)
## Iteration: 20 (-124675.9448, 0.0389)
## Iteration: 30 (-124673.5979, 0.0386)
## Iteration: 40 (-124671.2718, 0.0384)
## Iteration: 50 (-124668.9647, 0.0381)
## Group probs = (0.8373, 0.1243, 0.0384)
##
## Outer iteration: 38
## Iteration: 1 (-124899.8344, 0.0746)
## Iteration: 10 (-124897.7401, 0.0373)
## Iteration: 20 (-124895.4702, 0.0371)
## Iteration: 30 (-124893.2239, 0.0370)
## Iteration: 40 (-124890.9975, 0.0368)
## Iteration: 50 (-124888.7894, 0.0366)
## Group probs = (0.8392, 0.1228, 0.0379)
##
## Outer iteration: 39
## Iteration: 1 (-125321.7495, 0.1936)
## Iteration: 10 (-125319.7233, 0.0367)
## Iteration: 20 (-125317.5373, 0.0364)
## Iteration: 30 (-125315.3708, 0.0361)
## Iteration: 40 (-125313.2209, 0.0359)
```

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## Iteration: 50 (-125311.0867, 0.0357)
## Group probs = (0.8354, 0.1256, 0.0389)
##
## Outer iteration: 40
## Iteration: 1 (-124331.7853, 0.1828)
## Iteration: 10 (-124329.6639, 0.0346)
## Iteration: 20 (-124327.5291, 0.0344)
## Iteration: 30 (-124325.4333, 0.0343)
## Iteration: 40 (-124323.3635, 0.0341)
## Iteration: 50 (-124321.3146, 0.0340)
## Group probs = (0.8322, 0.1280, 0.0398)
##
## Outer iteration: 1
## Iteration: 1 (-143992.0963,   Inf)
## Iteration: 10 (-126320.9224, 4.1472)
## Iteration: 20 (-124473.2541, 1.9562)
## Iteration: 30 (-123720.0106, 1.2993)
## Iteration: 40 (-123280.5477, 0.9859)
## Iteration: 50 (-122979.4420, 0.8018)
## Group probs = (0.8339, 0.1297, 0.0364)
##
## Outer iteration: 2
## Iteration: 1 (-126394.9747, 1.5137)
## Iteration: 10 (-126212.9084, 0.6590)
## Iteration: 20 (-126051.8158, 0.5729)
## Iteration: 30 (-125918.2397, 0.5089)
## Iteration: 40 (-125804.5015, 0.4588)
## Iteration: 50 (-125705.8147, 0.4181)
## Group probs = (0.8401, 0.1259, 0.0340)
##
## Outer iteration: 3
## Iteration: 1 (-127274.6528, 0.6483)
## Iteration: 10 (-127191.7801, 0.3900)
## Iteration: 20 (-127109.9376, 0.3618)
## Iteration: 30 (-127036.3934, 0.3377)
## Iteration: 40 (-126969.7542, 0.3170)
## Iteration: 50 (-126908.9460, 0.2989)
## Group probs = (0.8406, 0.1252, 0.0342)
##
## Outer iteration: 4
## Iteration: 1 (-126956.5221, 0.3503)
## Iteration: 10 (-126903.9368, 0.2869)
## Iteration: 20 (-126850.1026, 0.2731)
## Iteration: 30 (-126800.3013, 0.2609)
## Iteration: 40 (-126754.0261, 0.2499)
## Iteration: 50 (-126710.8604, 0.2401)
## Group probs = (0.8412, 0.1242, 0.0346)
##
## Outer iteration: 5
## Iteration: 1 (-126886.5595, 0.2375)
## Iteration: 10 (-126848.8913, 0.2358)
## Iteration: 20 (-126809.6645, 0.2277)
## Iteration: 30 (-126772.8083, 0.2203)
## Iteration: 40 (-126738.0788, 0.2135)

```

```
## Iteration: 50 (-126705.2705, 0.2073)
## Group probs = (0.8420, 0.1231, 0.0349)
##
## Outer iteration: 6
## Iteration: 1 (-126875.7141, 0.2034)
## Iteration: 10 (-126846.9788, 0.2046)
## Iteration: 20 (-126816.7130, 0.1991)
## Iteration: 30 (-126787.9924, 0.1942)
## Iteration: 40 (-126760.6829, 0.1896)
## Iteration: 50 (-126734.6682, 0.1852)
## Group probs = (0.8410, 0.1232, 0.0357)
##
## Outer iteration: 7
## Iteration: 1 (-126521.8334, 0.2152)
## Iteration: 10 (-126499.2171, 0.1836)
## Iteration: 20 (-126475.2212, 0.1797)
## Iteration: 30 (-126452.2865, 0.1760)
## Iteration: 40 (-126430.3299, 0.1725)
## Iteration: 50 (-126409.2799, 0.1692)
## Group probs = (0.8389, 0.1246, 0.0366)
##
## Outer iteration: 8
## Iteration: 1 (-125809.8100, 0.1831)
## Iteration: 10 (-125791.4418, 0.1671)
## Iteration: 20 (-125771.9022, 0.1642)
## Iteration: 30 (-125753.1259, 0.1614)
## Iteration: 40 (-125735.0554, 0.1586)
## Iteration: 50 (-125717.6435, 0.1560)
## Group probs = (0.8395, 0.1242, 0.0363)
##
## Outer iteration: 9
## Iteration: 1 (-125910.4420, 0.2510)
## Iteration: 10 (-125895.0985, 0.1544)
## Iteration: 20 (-125878.6965, 0.1518)
## Iteration: 30 (-125862.8636, 0.1495)
## Iteration: 40 (-125847.5604, 0.1472)
## Iteration: 50 (-125832.7549, 0.1449)
## Group probs = (0.8392, 0.1243, 0.0365)
##
## Outer iteration: 10
## Iteration: 1 (-125776.4568, 0.1184)
## Iteration: 10 (-125763.5000, 0.1437)
## Iteration: 20 (-125749.5394, 0.1416)
## Iteration: 30 (-125736.0024, 0.1394)
## Iteration: 40 (-125722.8662, 0.1373)
## Iteration: 50 (-125710.1098, 0.1353)
## Group probs = (0.8398, 0.1236, 0.0365)
##
## Outer iteration: 11
## Iteration: 1 (-125807.3775, 0.4296)
## Iteration: 10 (-125796.1769, 0.1314)
## Iteration: 20 (-125784.1385, 0.1294)
## Iteration: 30 (-125772.4373, 0.1277)
## Iteration: 40 (-125761.0503, 0.1260)
```

```
## Iteration: 50 (-125749.9609, 0.1243)
## Group probs = (0.8406, 0.1229, 0.0365)
##
## Outer iteration: 12
## Iteration: 1 (-125942.9896, 0.1087)
## Iteration: 10 (-125933.2229, 0.1228)
## Iteration: 20 (-125922.6451, 0.1211)
## Iteration: 30 (-125912.3283, 0.1195)
## Iteration: 40 (-125902.2604, 0.1180)
## Iteration: 50 (-125892.4306, 0.1165)
## Group probs = (0.8397, 0.1233, 0.0370)
##
## Outer iteration: 13
## Iteration: 1 (-125649.7716, 0.1553)
## Iteration: 10 (-125641.1085, 0.1160)
## Iteration: 20 (-125631.7037, 0.1146)
## Iteration: 30 (-125622.5127, 0.1131)
## Iteration: 40 (-125613.5261, 0.1116)
## Iteration: 50 (-125604.7357, 0.1102)
## Group probs = (0.8374, 0.1252, 0.0374)
##
## Outer iteration: 14
## Iteration: 1 (-125006.1359, 0.2242)
## Iteration: 10 (-124998.3469, 0.1088)
## Iteration: 20 (-124989.9211, 0.1075)
## Iteration: 30 (-124981.6817, 0.1062)
## Iteration: 40 (-124973.6166, 0.1049)
## Iteration: 50 (-124965.7176, 0.1037)
## Group probs = (0.8373, 0.1255, 0.0372)
##
## Outer iteration: 15
## Iteration: 1 (-124992.6567, 0.2861)
## Iteration: 10 (-124985.6125, 0.1035)
## Iteration: 20 (-124977.9686, 0.1023)
## Iteration: 30 (-124970.4770, 0.1010)
## Iteration: 40 (-124963.1303, 0.0998)
## Iteration: 50 (-124955.9225, 0.0986)
## Group probs = (0.8373, 0.1259, 0.0368)
##
## Outer iteration: 16
## Iteration: 1 (-125011.7144, 0.1256)
## Iteration: 10 (-125005.2386, 0.0969)
## Iteration: 20 (-124998.2237, 0.0959)
## Iteration: 30 (-124991.3482, 0.0949)
## Iteration: 40 (-124984.6015, 0.0939)
## Iteration: 50 (-124977.9769, 0.0928)
## Group probs = (0.8389, 0.1248, 0.0363)
##
## Outer iteration: 17
## Iteration: 1 (-125386.3287, 0.2121)
## Iteration: 10 (-125380.3485, 0.0934)
## Iteration: 20 (-125373.8830, 0.0920)
## Iteration: 30 (-125367.5370, 0.0908)
## Iteration: 40 (-125361.3006, 0.0896)
```

```
## Iteration: 50 (-125355.1684, 0.0885)
## Group probs = (0.8388, 0.1242, 0.0370)
##
## Outer iteration: 18
## Iteration: 1 (-125306.3911, 0.1625)
## Iteration: 10 (-125300.9005, 0.0876)
## Iteration: 20 (-125294.9283, 0.0865)
## Iteration: 30 (-125289.0551, 0.0854)
## Iteration: 40 (-125283.2760, 0.0844)
## Iteration: 50 (-125277.5876, 0.0834)
## Group probs = (0.8386, 0.1241, 0.0373)
##
## Outer iteration: 19
## Iteration: 1 (-125216.9061, 0.2108)
## Iteration: 10 (-125211.8306, 0.0828)
## Iteration: 20 (-125206.2861, 0.0818)
## Iteration: 30 (-125200.8269, 0.0808)
## Iteration: 40 (-125195.4495, 0.0798)
## Iteration: 50 (-125190.1516, 0.0789)
## Group probs = (0.8391, 0.1238, 0.0371)
##
## Outer iteration: 20
## Iteration: 1 (-125334.5232, 0.0840)
## Iteration: 10 (-125329.8077, 0.0776)
## Iteration: 20 (-125324.6537, 0.0768)
## Iteration: 30 (-125319.5747, 0.0760)
## Iteration: 40 (-125314.5678, 0.0752)
## Iteration: 50 (-125309.6308, 0.0744)
## Group probs = (0.8368, 0.1256, 0.0377)
##
## Outer iteration: 21
## Iteration: 1 (-124682.7981, 0.2024)
## Iteration: 10 (-124678.2908, 0.0717)
## Iteration: 20 (-124673.4649, 0.0711)
## Iteration: 30 (-124668.7256, 0.0705)
## Iteration: 40 (-124664.0598, 0.0700)
## Iteration: 50 (-124659.4613, 0.0694)
## Group probs = (0.8345, 0.1277, 0.0378)
##
## Outer iteration: 22
## Iteration: 1 (-124108.0891, 0.1665)
## Iteration: 10 (-124103.8809, 0.0674)
## Iteration: 20 (-124099.3610, 0.0670)
## Iteration: 30 (-124094.9211, 0.0666)
## Iteration: 40 (-124090.5494, 0.0661)
## Iteration: 50 (-124086.2398, 0.0656)
## Group probs = (0.8342, 0.1283, 0.0376)
##
## Outer iteration: 23
## Iteration: 1 (-123989.3161, 0.1889)
## Iteration: 10 (-123985.4686, 0.0650)
## Iteration: 20 (-123981.2655, 0.0646)
## Iteration: 30 (-123977.1191, 0.0640)
## Iteration: 40 (-123973.0263, 0.0635)
```

```
## Iteration: 50 (-123968.9849, 0.0630)
## Group probs = (0.8330, 0.1292, 0.0378)
##
## Outer iteration: 24
## Iteration: 1 (-123640.2477, 0.0667)
## Iteration: 10 (-123636.6279, 0.0620)
## Iteration: 20 (-123632.6805, 0.0615)
## Iteration: 30 (-123628.7834, 0.0610)
## Iteration: 40 (-123624.9336, 0.0605)
## Iteration: 50 (-123621.1292, 0.0600)
## Group probs = (0.8329, 0.1298, 0.0373)
##
## Outer iteration: 25
## Iteration: 1 (-123673.9074, 0.2151)
## Iteration: 10 (-123670.4399, 0.0607)
## Iteration: 20 (-123666.6776, 0.0601)
## Iteration: 30 (-123662.9638, 0.0595)
## Iteration: 40 (-123659.2935, 0.0590)
## Iteration: 50 (-123655.6646, 0.0584)
## Group probs = (0.8298, 0.1321, 0.0381)
##
## Outer iteration: 26
## Iteration: 1 (-122856.1396, 0.1684)
## Iteration: 10 (-122852.8240, 0.0577)
## Iteration: 20 (-122849.2476, 0.0574)
## Iteration: 30 (-122845.7164, 0.0569)
## Iteration: 40 (-122842.2259, 0.0564)
## Iteration: 50 (-122838.7742, 0.0559)
## Group probs = (0.8300, 0.1325, 0.0375)
##
## Outer iteration: 27
## Iteration: 1 (-122898.2378, 0.3558)
## Iteration: 10 (-122895.0623, 0.0537)
## Iteration: 20 (-122891.6523, 0.0532)
## Iteration: 30 (-122888.2953, 0.0529)
## Iteration: 40 (-122884.9826, 0.0527)
## Iteration: 50 (-122881.7101, 0.0523)
## Group probs = (0.8323, 0.1310, 0.0366)
##
## Outer iteration: 28
## Iteration: 1 (-123525.2472, 0.3166)
## Iteration: 10 (-123522.0842, 0.0548)
## Iteration: 20 (-123518.8029, 0.0541)
## Iteration: 30 (-123515.5795, 0.0534)
## Iteration: 40 (-123512.3986, 0.0527)
## Iteration: 50 (-123509.2545, 0.0522)
## Group probs = (0.8338, 0.1294, 0.0368)
##
## Outer iteration: 29
## Iteration: 1 (-123849.9700, 0.1934)
## Iteration: 10 (-123847.0860, 0.0519)
## Iteration: 20 (-123843.9645, 0.0512)
## Iteration: 30 (-123840.8773, 0.0507)
## Iteration: 40 (-123837.8213, 0.0502)
```

```
## Iteration: 50 (-123834.7950, 0.0497)
## Group probs = (0.8344, 0.1286, 0.0370)
##
## Outer iteration: 30
## Iteration: 1 (-123980.1097, 0.0649)
## Iteration: 10 (-123977.3928, 0.0492)
## Iteration: 20 (-123974.4271, 0.0487)
## Iteration: 30 (-123971.4908, 0.0483)
## Iteration: 40 (-123968.5822, 0.0479)
## Iteration: 50 (-123965.7006, 0.0475)
## Group probs = (0.8354, 0.1277, 0.0369)
##
## Outer iteration: 31
## Iteration: 1 (-124205.2704, 0.1110)
## Iteration: 10 (-124202.6788, 0.0475)
## Iteration: 20 (-124199.8447, 0.0471)
## Iteration: 30 (-124197.0372, 0.0468)
## Iteration: 40 (-124194.2551, 0.0464)
## Iteration: 50 (-124191.4977, 0.0460)
## Group probs = (0.8357, 0.1272, 0.0371)
##
## Outer iteration: 32
## Iteration: 1 (-124242.0285, 0.0606)
## Iteration: 10 (-124239.5343, 0.0460)
## Iteration: 20 (-124236.7987, 0.0456)
## Iteration: 30 (-124234.0888, 0.0452)
## Iteration: 40 (-124231.4030, 0.0448)
## Iteration: 50 (-124228.7407, 0.0444)
## Group probs = (0.8367, 0.1266, 0.0367)
##
## Outer iteration: 33
## Iteration: 1 (-124545.8663, 0.1572)
## Iteration: 10 (-124543.4309, 0.0437)
## Iteration: 20 (-124540.7945, 0.0434)
## Iteration: 30 (-124538.1852, 0.0431)
## Iteration: 40 (-124535.6000, 0.0428)
## Iteration: 50 (-124533.0376, 0.0425)
## Group probs = (0.8354, 0.1273, 0.0373)
##
## Outer iteration: 34
## Iteration: 1 (-124237.4990, 0.2115)
## Iteration: 10 (-124235.0846, 0.0434)
## Iteration: 20 (-124232.4932, 0.0430)
## Iteration: 30 (-124229.9350, 0.0426)
## Iteration: 40 (-124227.4035, 0.0422)
## Iteration: 50 (-124224.8962, 0.0418)
## Group probs = (0.8364, 0.1267, 0.0369)
##
## Outer iteration: 35
## Iteration: 1 (-124467.5201, 0.0990)
## Iteration: 10 (-124465.2644, 0.0410)
## Iteration: 20 (-124462.8217, 0.0407)
## Iteration: 30 (-124460.4010, 0.0404)
## Iteration: 40 (-124458.0005, 0.0401)
```

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## Iteration: 50 (-124455.6194, 0.0399)
## Group probs = (0.8331, 0.1291, 0.0378)
##
## Outer iteration: 36
## Iteration: 1 (-123598.0495, 0.1335)
## Iteration: 10 (-123595.7355, 0.0395)
## Iteration: 20 (-123593.3640, 0.0393)
## Iteration: 30 (-123591.0201, 0.0391)
## Iteration: 40 (-123588.6977, 0.0389)
## Iteration: 50 (-123586.3949, 0.0387)
## Group probs = (0.8338, 0.1288, 0.0374)
##
## Outer iteration: 37
## Iteration: 1 (-123800.5630, 0.1080)
## Iteration: 10 (-123798.4707, 0.0383)
## Iteration: 20 (-123796.1915, 0.0380)
## Iteration: 30 (-123793.9320, 0.0379)
## Iteration: 40 (-123791.6908, 0.0377)
## Iteration: 50 (-123789.4670, 0.0375)
## Group probs = (0.8358, 0.1271, 0.0371)
##
## Outer iteration: 38
## Iteration: 1 (-124269.9931, 0.1553)
## Iteration: 10 (-124267.9285, 0.0384)
## Iteration: 20 (-124265.7037, 0.0381)
## Iteration: 30 (-124263.5039, 0.0377)
## Iteration: 40 (-124261.3244, 0.0374)
## Iteration: 50 (-124259.1633, 0.0371)
## Group probs = (0.8329, 0.1289, 0.0382)
##
## Outer iteration: 39
## Iteration: 1 (-123469.2764, 0.2312)
## Iteration: 10 (-123467.2564, 0.0361)
## Iteration: 20 (-123465.1234, 0.0358)
## Iteration: 30 (-123463.0140, 0.0356)
## Iteration: 40 (-123460.9230, 0.0353)
## Iteration: 50 (-123458.8486, 0.0352)
## Group probs = (0.8352, 0.1270, 0.0378)
##
## Outer iteration: 40
## Iteration: 1 (-124025.0295, 0.1041)
## Iteration: 10 (-124023.1185, 0.0351)
## Iteration: 20 (-124021.0583, 0.0348)
## Iteration: 30 (-124019.0162, 0.0346)
## Iteration: 40 (-124016.9900, 0.0344)
## Iteration: 50 (-124014.9788, 0.0342)
## Group probs = (0.8371, 0.1257, 0.0372)
##
## Outer iteration: 1
## Iteration: 1 (-143926.2245, Inf)
## Iteration: 10 (-126237.5765, 4.1359)
## Iteration: 20 (-124394.4138, 1.9479)
## Iteration: 30 (-123647.7916, 1.2898)
## Iteration: 40 (-123216.1990, 0.9751)

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## Iteration: 50 (-122923.3411, 0.7905)
## Group probs = (0.8369, 0.1286, 0.0345)
##
## Outer iteration: 2
## Iteration: 1 (-127092.2687, 1.5359)
## Iteration: 10 (-126918.1505, 0.6494)
## Iteration: 20 (-126766.2948, 0.5635)
## Iteration: 30 (-126641.0389, 0.5007)
## Iteration: 40 (-126534.4934, 0.4519)
## Iteration: 50 (-126441.8363, 0.4126)
## Group probs = (0.8408, 0.1260, 0.0332)
##
## Outer iteration: 3
## Iteration: 1 (-127365.1421, 0.5606)
## Iteration: 10 (-127287.9259, 0.3845)
## Iteration: 20 (-127210.9562, 0.3573)
## Iteration: 30 (-127141.2547, 0.3339)
## Iteration: 40 (-127077.6014, 0.3136)
## Iteration: 50 (-127019.0713, 0.2959)
## Group probs = (0.8461, 0.1223, 0.0316)
##
## Outer iteration: 4
## Iteration: 1 (-128433.5707, 0.4501)
## Iteration: 10 (-128381.4217, 0.2855)
## Iteration: 20 (-128327.8394, 0.2718)
## Iteration: 30 (-128277.8956, 0.2596)
## Iteration: 40 (-128231.1553, 0.2486)
## Iteration: 50 (-128187.2661, 0.2388)
## Group probs = (0.8470, 0.1208, 0.0322)
##
## Outer iteration: 5
## Iteration: 1 (-128349.4358, 0.2641)
## Iteration: 10 (-128310.8023, 0.2338)
## Iteration: 20 (-128270.3299, 0.2256)
## Iteration: 30 (-128232.1067, 0.2183)
## Iteration: 40 (-128195.9202, 0.2116)
## Iteration: 50 (-128161.5897, 0.2055)
## Group probs = (0.8444, 0.1218, 0.0338)
##
## Outer iteration: 6
## Iteration: 1 (-127436.0727, 0.2395)
## Iteration: 10 (-127406.0814, 0.2019)
## Iteration: 20 (-127374.4658, 0.1966)
## Iteration: 30 (-127344.3730, 0.1917)
## Iteration: 40 (-127315.6764, 0.1872)
## Iteration: 50 (-127288.2696, 0.1831)
## Group probs = (0.8442, 0.1218, 0.0341)
##
## Outer iteration: 7
## Iteration: 1 (-127235.5072, 0.2368)
## Iteration: 10 (-127211.6264, 0.1807)
## Iteration: 20 (-127186.2576, 0.1771)
## Iteration: 30 (-127161.9643, 0.1737)
## Iteration: 40 (-127138.6680, 0.1705)
```

```
## Iteration: 50 (-127116.3012, 0.1674)
## Group probs = (0.8431, 0.1226, 0.0343)
##
## Outer iteration: 8
## Iteration: 1 (-126875.6707, 0.2055)
## Iteration: 10 (-126856.0429, 0.1662)
## Iteration: 20 (-126835.0770, 0.1634)
## Iteration: 30 (-126814.9072, 0.1608)
## Iteration: 40 (-126795.4809, 0.1582)
## Iteration: 50 (-126776.7519, 0.1556)
## Group probs = (0.8426, 0.1226, 0.0349)
##
## Outer iteration: 9
## Iteration: 1 (-126619.9657, 0.2537)
## Iteration: 10 (-126603.5401, 0.1554)
## Iteration: 20 (-126585.9249, 0.1530)
## Iteration: 30 (-126568.9122, 0.1506)
## Iteration: 40 (-126552.4646, 0.1483)
## Iteration: 50 (-126536.5498, 0.1461)
## Group probs = (0.8427, 0.1226, 0.0347)
##
## Outer iteration: 10
## Iteration: 1 (-126596.9239, 0.1521)
## Iteration: 10 (-126582.9821, 0.1439)
## Iteration: 20 (-126567.9790, 0.1419)
## Iteration: 30 (-126553.4373, 0.1400)
## Iteration: 40 (-126539.3307, 0.1381)
## Iteration: 50 (-126525.6362, 0.1362)
## Group probs = (0.8424, 0.1226, 0.0350)
##
## Outer iteration: 11
## Iteration: 1 (-126428.8422, 0.2667)
## Iteration: 10 (-126416.8278, 0.1334)
## Iteration: 20 (-126403.8813, 0.1316)
## Iteration: 30 (-126391.3000, 0.1300)
## Iteration: 40 (-126379.0614, 0.1283)
## Iteration: 50 (-126367.1478, 0.1266)
## Group probs = (0.8413, 0.1234, 0.0354)
##
## Outer iteration: 12
## Iteration: 1 (-126055.1592, 0.1328)
## Iteration: 10 (-126044.6766, 0.1260)
## Iteration: 20 (-126033.3281, 0.1244)
## Iteration: 30 (-126022.2663, 0.1228)
## Iteration: 40 (-126011.4771, 0.1212)
## Iteration: 50 (-126000.9484, 0.1196)
## Group probs = (0.8394, 0.1254, 0.0353)
##
## Outer iteration: 13
## Iteration: 1 (-125628.6728, 0.3864)
## Iteration: 10 (-125619.1845, 0.1204)
## Iteration: 20 (-125609.0189, 0.1190)
## Iteration: 30 (-125599.1035, 0.1175)
## Iteration: 40 (-125589.4191, 0.1159)
```

```
## Iteration: 50 (-125579.9542, 0.1144)
## Group probs = (0.8390, 0.1252, 0.0357)
##
## Outer iteration: 14
## Iteration: 1 (-125488.7110, 0.2039)
## Iteration: 10 (-125480.2921, 0.1136)
## Iteration: 20 (-125471.1837, 0.1120)
## Iteration: 30 (-125462.2748, 0.1105)
## Iteration: 40 (-125453.5553, 0.1090)
## Iteration: 50 (-125445.0170, 0.1076)
## Group probs = (0.8400, 0.1245, 0.0355)
##
## Outer iteration: 15
## Iteration: 1 (-125661.9344, 0.2339)
## Iteration: 10 (-125654.3938, 0.1048)
## Iteration: 20 (-125646.1985, 0.1035)
## Iteration: 30 (-125638.1677, 0.1023)
## Iteration: 40 (-125630.2935, 0.1011)
## Iteration: 50 (-125622.5698, 0.0999)
## Group probs = (0.8395, 0.1250, 0.0354)
##
## Outer iteration: 16
## Iteration: 1 (-125514.4925, 0.1744)
## Iteration: 10 (-125507.6387, 0.0986)
## Iteration: 20 (-125500.1950, 0.0974)
## Iteration: 30 (-125492.8924, 0.0963)
## Iteration: 40 (-125485.7237, 0.0952)
## Iteration: 50 (-125478.6837, 0.0942)
## Group probs = (0.8366, 0.1277, 0.0357)
##
## Outer iteration: 17
## Iteration: 1 (-124793.7013, 0.2529)
## Iteration: 10 (-124787.3714, 0.0936)
## Iteration: 20 (-124780.5599, 0.0927)
## Iteration: 30 (-124773.8762, 0.0917)
## Iteration: 40 (-124767.3106, 0.0907)
## Iteration: 50 (-124760.8577, 0.0896)
## Group probs = (0.8358, 0.1284, 0.0358)
##
## Outer iteration: 18
## Iteration: 1 (-124540.3782, 0.1584)
## Iteration: 10 (-124534.5542, 0.0879)
## Iteration: 20 (-124528.2567, 0.0870)
## Iteration: 30 (-124522.0672, 0.0861)
## Iteration: 40 (-124515.9788, 0.0851)
## Iteration: 50 (-124509.9874, 0.0842)
## Group probs = (0.8369, 0.1281, 0.0350)
##
## Outer iteration: 19
## Iteration: 1 (-124811.8109, 0.2050)
## Iteration: 10 (-124806.3302, 0.0832)
## Iteration: 20 (-124800.4363, 0.0821)
## Iteration: 30 (-124794.6484, 0.0812)
## Iteration: 40 (-124788.9558, 0.0804)
```

```
## Iteration: 50 (-124783.3531, 0.0796)
## Group probs = (0.8368, 0.1277, 0.0354)
##
## Outer iteration: 20
## Iteration: 1 (-124753.3305, 0.2336)
## Iteration: 10 (-124748.2459, 0.0808)
## Iteration: 20 (-124742.7791, 0.0799)
## Iteration: 30 (-124737.4084, 0.0789)
## Iteration: 40 (-124732.1218, 0.0778)
## Iteration: 50 (-124726.9138, 0.0769)
## Group probs = (0.8375, 0.1271, 0.0354)
##
## Outer iteration: 21
## Iteration: 1 (-124932.0788, 0.1148)
## Iteration: 10 (-124927.3709, 0.0757)
## Iteration: 20 (-124922.2578, 0.0748)
## Iteration: 30 (-124917.2216, 0.0740)
## Iteration: 40 (-124912.2566, 0.0732)
## Iteration: 50 (-124907.3595, 0.0724)
## Group probs = (0.8379, 0.1268, 0.0353)
##
## Outer iteration: 22
## Iteration: 1 (-124957.1387, 0.3294)
## Iteration: 10 (-124952.7797, 0.0707)
## Iteration: 20 (-124948.0492, 0.0699)
## Iteration: 30 (-124943.3854, 0.0692)
## Iteration: 40 (-124938.7835, 0.0686)
## Iteration: 50 (-124934.2409, 0.0679)
## Group probs = (0.8358, 0.1281, 0.0361)
##
## Outer iteration: 23
## Iteration: 1 (-124377.9245, 0.1351)
## Iteration: 10 (-124373.8068, 0.0675)
## Iteration: 20 (-124369.3562, 0.0670)
## Iteration: 30 (-124364.9638, 0.0663)
## Iteration: 40 (-124360.6261, 0.0657)
## Iteration: 50 (-124356.3415, 0.0650)
## Group probs = (0.8367, 0.1277, 0.0356)
##
## Outer iteration: 24
## Iteration: 1 (-124617.0834, 0.1074)
## Iteration: 10 (-124613.2365, 0.0641)
## Iteration: 20 (-124609.0269, 0.0634)
## Iteration: 30 (-124604.8694, 0.0628)
## Iteration: 40 (-124600.7618, 0.0623)
## Iteration: 50 (-124596.7027, 0.0617)
## Group probs = (0.8369, 0.1279, 0.0352)
##
## Outer iteration: 25
## Iteration: 1 (-124677.3241, 0.1856)
## Iteration: 10 (-124673.6721, 0.0616)
## Iteration: 20 (-124669.6883, 0.0610)
## Iteration: 30 (-124665.7524, 0.0605)
## Iteration: 40 (-124661.8615, 0.0599)
```

```
## Iteration: 50 (-124658.0141, 0.0594)
## Group probs = (0.8349, 0.1293, 0.0358)
##
## Outer iteration: 26
## Iteration: 1 (-124151.3205, 0.1249)
## Iteration: 10 (-124147.8595, 0.0584)
## Iteration: 20 (-124144.0886, 0.0581)
## Iteration: 30 (-124140.3619, 0.0576)
## Iteration: 40 (-124136.6766, 0.0571)
## Iteration: 50 (-124133.0312, 0.0566)
## Group probs = (0.8370, 0.1277, 0.0353)
##
## Outer iteration: 27
## Iteration: 1 (-124686.3203, 0.1262)
## Iteration: 10 (-124683.0155, 0.0558)
## Iteration: 20 (-124679.4106, 0.0553)
## Iteration: 30 (-124675.8475, 0.0548)
## Iteration: 40 (-124672.3236, 0.0543)
## Iteration: 50 (-124668.8372, 0.0539)
## Group probs = (0.8394, 0.1259, 0.0346)
##
## Outer iteration: 28
## Iteration: 1 (-125293.3661, 0.2938)
## Iteration: 10 (-125290.0024, 0.0560)
## Iteration: 20 (-125286.5024, 0.0552)
## Iteration: 30 (-125283.0638, 0.0545)
## Iteration: 40 (-125279.6706, 0.0539)
## Iteration: 50 (-125276.3166, 0.0533)
## Group probs = (0.8402, 0.1254, 0.0344)
##
## Outer iteration: 29
## Iteration: 1 (-125494.5229, 0.1668)
## Iteration: 10 (-125491.4658, 0.0532)
## Iteration: 20 (-125488.1505, 0.0526)
## Iteration: 30 (-125484.8753, 0.0521)
## Iteration: 40 (-125481.6354, 0.0516)
## Iteration: 50 (-125478.4288, 0.0511)
## Group probs = (0.8404, 0.1252, 0.0345)
##
## Outer iteration: 30
## Iteration: 1 (-125515.8773, 0.1273)
## Iteration: 10 (-125513.0024, 0.0498)
## Iteration: 20 (-125509.8674, 0.0494)
## Iteration: 30 (-125506.7659, 0.0490)
## Iteration: 40 (-125503.6949, 0.0487)
## Iteration: 50 (-125500.6528, 0.0484)
## Group probs = (0.8383, 0.1266, 0.0351)
##
## Outer iteration: 31
## Iteration: 1 (-124939.2969, 0.1359)
## Iteration: 10 (-124936.5598, 0.0482)
## Iteration: 20 (-124933.5700, 0.0479)
## Iteration: 30 (-124930.6094, 0.0475)
## Iteration: 40 (-124927.6761, 0.0471)
```

```
## Iteration: 50 (-124924.7694, 0.0468)
## Group probs = (0.8374, 0.1268, 0.0358)
##
## Outer iteration: 32
## Iteration: 1 (-124693.6763, 0.1954)
## Iteration: 10 (-124690.9698, 0.0452)
## Iteration: 20 (-124688.0827, 0.0448)
## Iteration: 30 (-124685.2374, 0.0445)
## Iteration: 40 (-124682.4247, 0.0442)
## Iteration: 50 (-124679.6409, 0.0440)
## Group probs = (0.8367, 0.1269, 0.0364)
##
## Outer iteration: 33
## Iteration: 1 (-124469.9048, 0.1164)
## Iteration: 10 (-124467.3185, 0.0453)
## Iteration: 20 (-124464.5374, 0.0449)
## Iteration: 30 (-124461.7885, 0.0444)
## Iteration: 40 (-124459.0673, 0.0440)
## Iteration: 50 (-124456.3716, 0.0436)
## Group probs = (0.8379, 0.1261, 0.0360)
##
## Outer iteration: 34
## Iteration: 1 (-124766.6245, 0.1280)
## Iteration: 10 (-124764.2228, 0.0428)
## Iteration: 20 (-124761.5961, 0.0425)
## Iteration: 30 (-124758.9922, 0.0422)
## Iteration: 40 (-124756.4098, 0.0419)
## Iteration: 50 (-124753.8482, 0.0416)
## Group probs = (0.8372, 0.1265, 0.0363)
##
## Outer iteration: 35
## Iteration: 1 (-124572.8848, 0.1065)
## Iteration: 10 (-124570.5775, 0.0415)
## Iteration: 20 (-124568.0412, 0.0412)
## Iteration: 30 (-124565.5260, 0.0409)
## Iteration: 40 (-124563.0311, 0.0406)
## Iteration: 50 (-124560.5559, 0.0404)
## Group probs = (0.8385, 0.1255, 0.0360)
##
## Outer iteration: 36
## Iteration: 1 (-124920.6896, 0.1275)
## Iteration: 10 (-124918.4319, 0.0406)
## Iteration: 20 (-124915.9671, 0.0403)
## Iteration: 30 (-124913.5251, 0.0400)
## Iteration: 40 (-124911.1038, 0.0397)
## Iteration: 50 (-124908.7020, 0.0394)
## Group probs = (0.8335, 0.1291, 0.0374)
##
## Outer iteration: 37
## Iteration: 1 (-123590.5715, 0.2761)
## Iteration: 10 (-123588.1897, 0.0379)
## Iteration: 20 (-123585.7766, 0.0376)
## Iteration: 30 (-123583.4090, 0.0374)
## Iteration: 40 (-123581.0728, 0.0373)
```


